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NATIONAL EUTROPHICATION SURVEY

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REPORT

ON

LAKE POWELL

COCONINO COUNTY, ARIZONA

GARFIELD, KANE, AND

SAN JUAN COUNTIES, UTAH

EPA REGIONS VIII & IX

WORKING PAPER No. 733

WITH THE COOPERATION OF THE

ARIZONA STATE DEPARTMENT OF HEALTH

AND THE

ARIZONA NATIONAL GUARD

AUGUST, 1977

REPORT ON LAKE POWELL

COCONINO COUNTY, ARIZONA

GARFIELD, KANE, AND SAN JUAN COUNTIES, UTAH

EPA REGIONS VIII & IX

by

National Eutrophication Survey

Water and Land Quality Branch
Monitoring Operations Division
Environmental Monitoring & Support Laboratory
Las Vegas, Nevada

and

Special Studies Branch
Corvallis Environmental Research Laboratory
Corvallis, Oregon

Working Paper No. 733

OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY

August 1977

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point source discharge reduction and nonpoint source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by the U.S. Environmental Protection Agency and to augment plans implementation by the states.

ACKNOWLEDGMENTS

The staff of the National Eutrophication Survey (Office of Research and Development, U.S. Environmental Protection Agency) expresses sincere appreciation to the Arizona State Department of Health for professional involvement, to the Arizona National Guard for conducting the tributary sampling phase of the Survey, and to those Arizona wastewater treatment plant operators who provided effluent samples and flow data.

The staffs of the Bureau of Water Quality Control, Environmental Health Services, Arizona State Department of Health, and the Arizona Game and Fish Department, provided invaluable lake documentation and counsel during the Survey, reviewed the preliminary reports and provided critiques most useful in the preparation of this Working Paper Series.

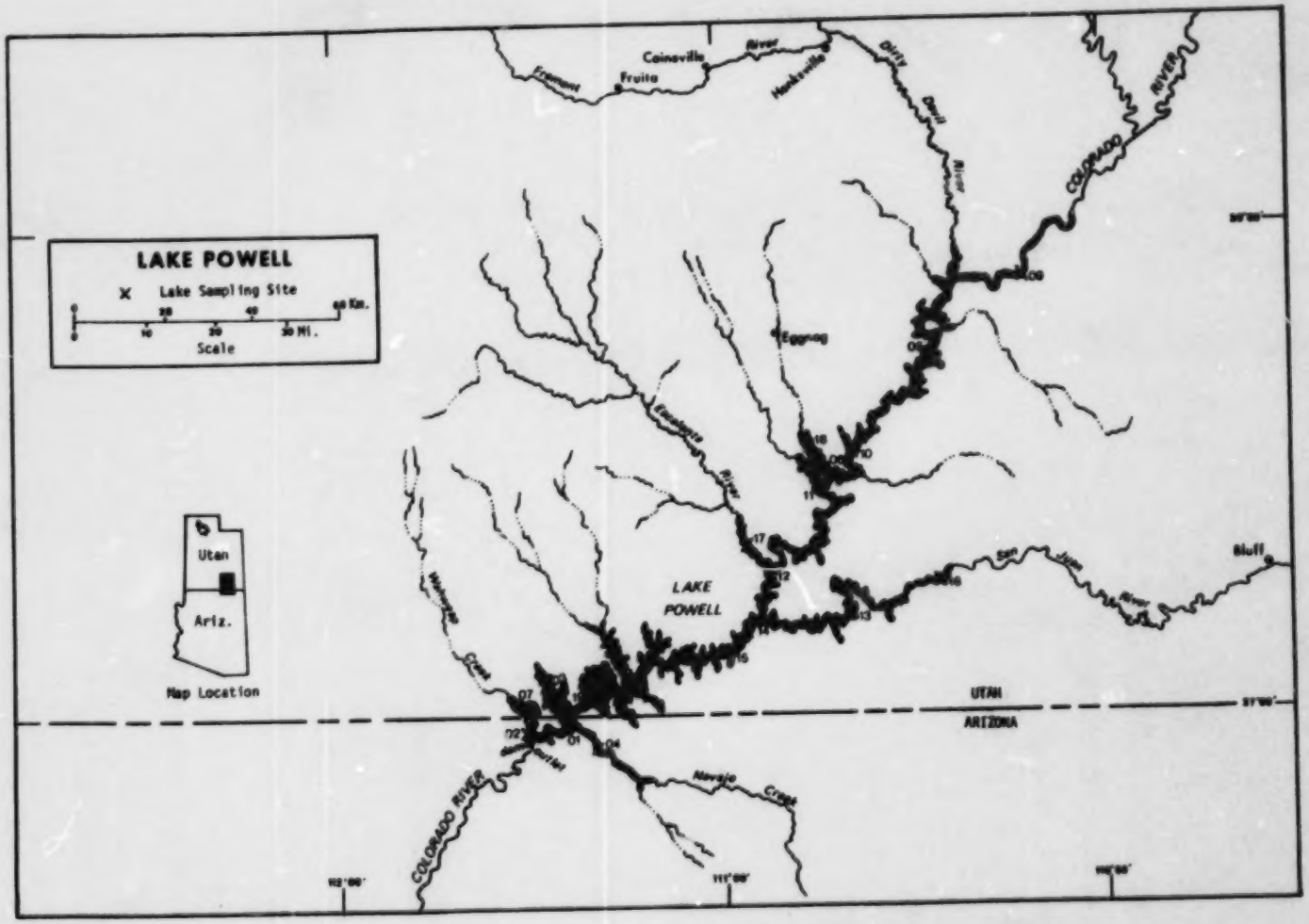
Major General John G. Smith, the Adjutant General of Arizona, and Project Officer Colonel Richard A. Colson, who directed the volunteer efforts of the Arizona National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF ARIZONA

LAKE NAME	COUNTY
Big Lake	Apache
Fools Hollow Lake	Navajo
Lake Havasu	Mohave (San Bernadino in CA)
Luna Lake	Apache
Lyman Lake	Apache
Lake Mohave	Mohave (Clark in NV)
Lake Pleasant	Yavapai, Maricopa
Lake Powell	Coconino (Kane, Garfield, San Juan in UT)
Rainbow Lake	Navajo
Theodore Roosevelt Lake	Gila
San Carlos Reservoir	Graham, Gila, Pinal


LAKE POWELL
X Lake Sampling Site
Scale
Utah
Ariz.
Map Location
LAKE POWELL
Colorado River
Escalante River
Dirty Devil River
Fremont River
Fruita
Hanksville
Bluff
San Juan River
Navajo Creek
Hansen Creek
Egnar
UTAH
ARIZONA

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15. SUPPLEMENTARY NOTES

Prepared in cooperation with the U.S. Environmental Protection Agency, Pacific Northwest Environmental Research Laboratory, Corvallis, Oregon 97330

16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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REPORT ON LAKE POWELL, ARIZONA

STORET NO. 0408

I. CONCLUSIONS

A. Trophic Condition:

Survey data indicate that Lake Powell is borderline between oligotrophic and mesotrophic. Low chlorophyll a values, low phosphorus values, and only slight oxygen depression were observed at open lake stations. Standiford, et al., (1973) cite data from Hansmann, Kidd, and Gilbert, who rate the lower basin as naturally eutrophic based on productivity studies. For a comparison of Lake Powell's water quality with other Arizona and Utah lakes see Appendix A.

B. Rate-Limiting Nutrient:

Algal assay results indicate that the reservoir is phosphorus limited. Inorganic nitrogen to orthophosphorus ratios obtained from the lake data are high (N/P > 25/1), suggesting phosphorus limitation.

C. Nutrient Controllability:

Lake Powell receives water from three major sources, the Colorado, Green, and San Juan Rivers, and several minor streams. These rivers were not monitored as part of the Survey, but some data are available from USGS monitoring stations. Total phosphorus values in both the Green and Colorado Rivers

are roughly an order of magnitude greater than those observed in the lake. It appears that the upper reaches of the lake act as a nutrient sink since values at Station 09 (Figure 3), the uppermost Survey station, are already relatively low. Such nutrient removal near the tributary mouths is likely to be permanent unless the deposited sediments are exposed to erosive action by inflowing waters as a result of lowered lake levels.

Values at Station 09 are, however, greater than other lake nutrient levels, particularly in the summer sampling rounds following maximum runoff. Controlling the nutrient load of these large rivers which constitute the main source of agricultural water in their respective basins would be very difficult. Lake Powell's great depth and the effective trapping of nutrients in its upper reaches should maintain mesotrophic conditions for several decades.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS†

A. Lake Morphometry:*

1. Surface area: 653.16 km^2.
2. Mean depth: 51.0 meters.
3. Maximum depth: 170.0 meters.
4. Volume: 33.304 x 10^9 m^3.
5. Mean hydraulic retention time: 2 years.

B. Tributary and Outlet:**

1. Tributaries

Name and Location of Gaging Station	Drainage Area (km^3)	Mean Flow (m^3/sec)	% of Total
Colorado River at Cisco, Utah	62,678	173.0	43.9
Green River at Green River, Utah (includes San Rafael River Data)	109,531	175.0	44.4
Dirty Devil River at Hanksville, Utah	9,039	3.5	0.9
Escalante River at Escalante, Utah	816	0.6	0.2
San Juan River at Bluff, Utah	59,570	41.7	10.6
Totals	241,634	393.8	100.0

---

†Table of metric conversion--Appendix B.

*BUREC, 1966. All values based on pool elevation of 1128 meters (3770 feet) above sea level.

**USGS, 1973. Discrepancy between tributary and outlet total drainage area is due to location of tributary monitoring sites about 100 kilometers above the confluence of the tributary and the lake, and because the outlet site is approximately 15 kilometers below Glen Canyon Dam. The difference of 11% between inflow and outflow is due to the rising pool elevation during the period of record, evaporation, and ground water recharge into the sandstone bedrock of Lake Powell.

2. Outlet -

Name and Location of Gaging Station	Drainage Area (km^3)	Mean Flow (m^3/sec)	% of Total
Colorado River at Lees Ferry	279,459	350.0	88.9

C. Precipitation:*

1. Average annual: 12 cm.

D. Pool Elevation above Sea Level

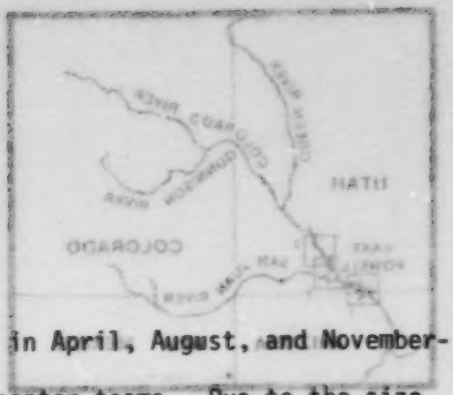
1. January, 1965 — 1064 meters (3492 feet)

2. December, 1969 — 1088 meters (3572 feet)

Increase 1965-1969 — 24 meters

3. Average for 1975 — 1116 meters (3660 feet)

*From National Park Service circular, based on 8 years of records at Wahweap.



III. LAKE WATER QUALITY SUMMARY

A. Collection Methods

Lake Powell was sampled in April, August, and November-December of 1975 by NES helicopter teams. Due to the size and morphology of the lake, adverse weather conditions, and logistic considerations both the spring and fall samplings were accomplished in two temporally separate periods. In April, Stations 01-08 were sampled on the 15th and 16th while Stations 09-19 were sampled on the 28th and 29th (Figures 1-3). Station 08 was located well out of the Colorado River Channel in the lee of protective bluffs. Station 19 replaced Station 08 which was not resampled on subsequent visits. Fall samples were collected at Stations 06, 13-16, and 18 on November 24th and 25th. On December 1st, 2nd, and 3rd, Stations 01-07, 09-12, 15, 17, 18, and 19 were sampled repeating three earlier stations. Significant changes did occur in the short interval between the two fall sampling periods.

Sample collection was limited to the upper 220 feet (67 meters) of the water column because of cable length. Consequently, data from deeper waters were not collected. In situ determinations of temperature, turbidity, and conductivity were made utilizing both analog and digital outputs. Samples were collected at selected depths for dissolved oxygen, pH,

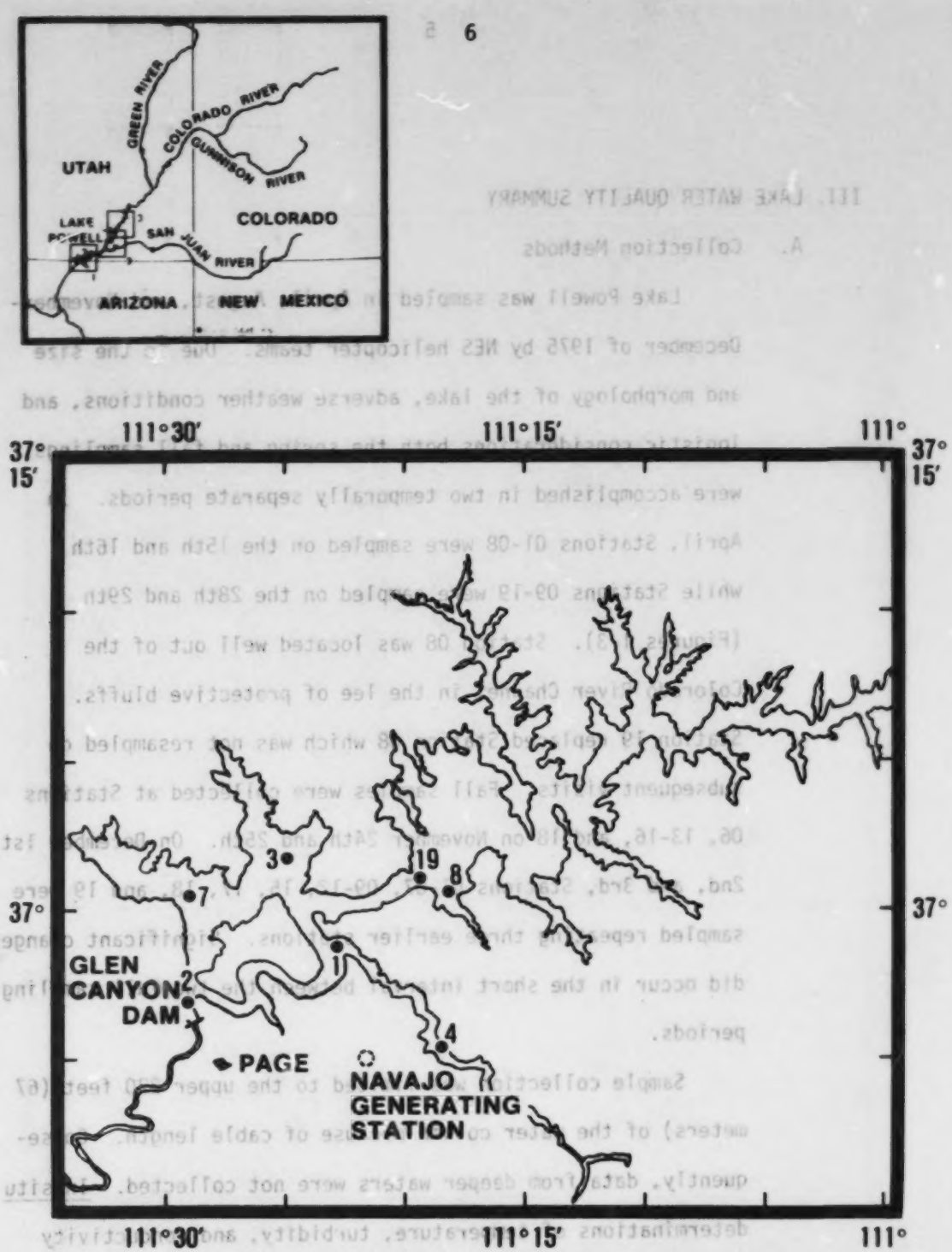


Figure 1. Lake Powell and Major Tributaries (top). Station Locations, Lake Powell. Glen Canyon Dam to Cathedral Canyon (bottom).

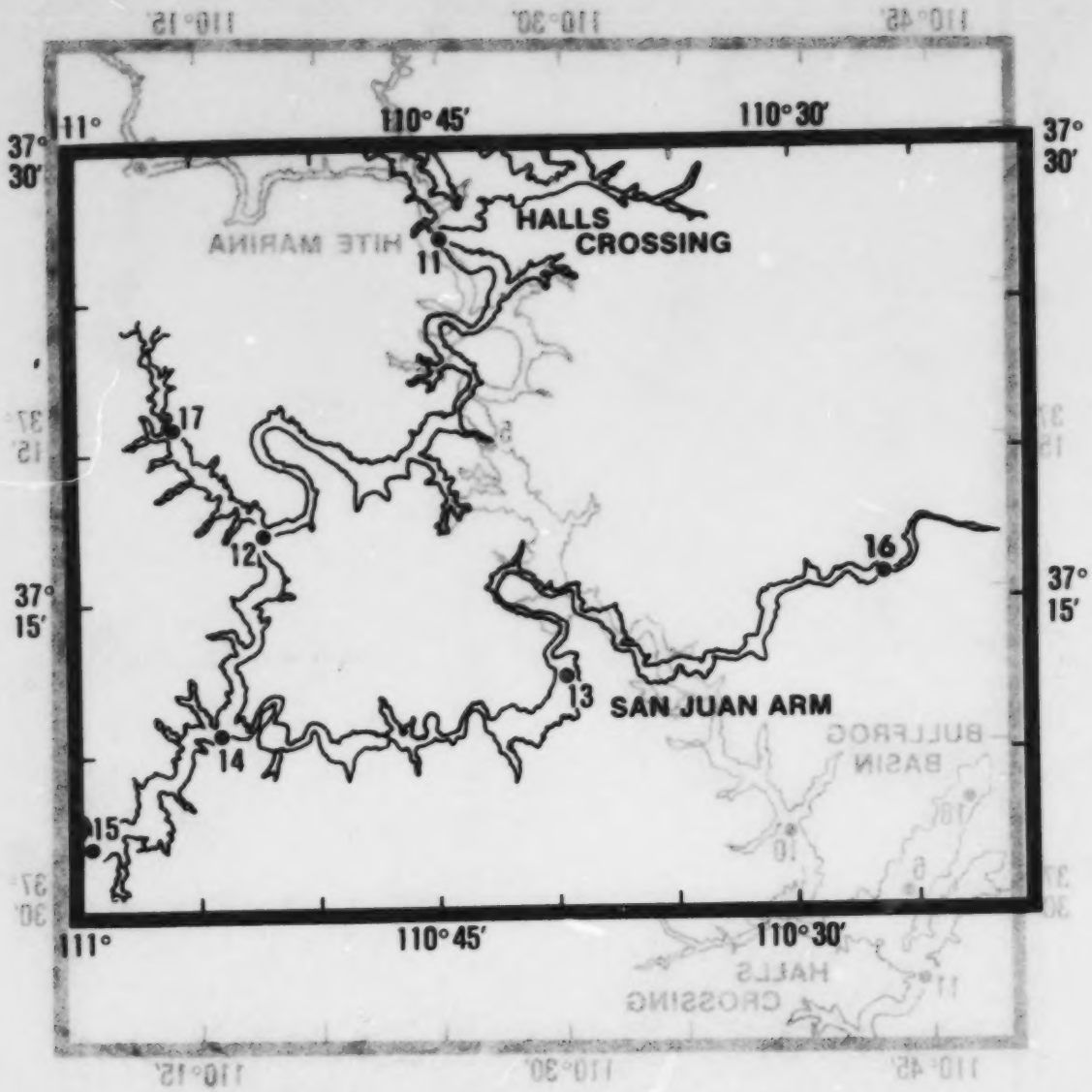


Figure 2. Station Locations, Lake Powell. Cathedral Canyon to Halls Crossing.

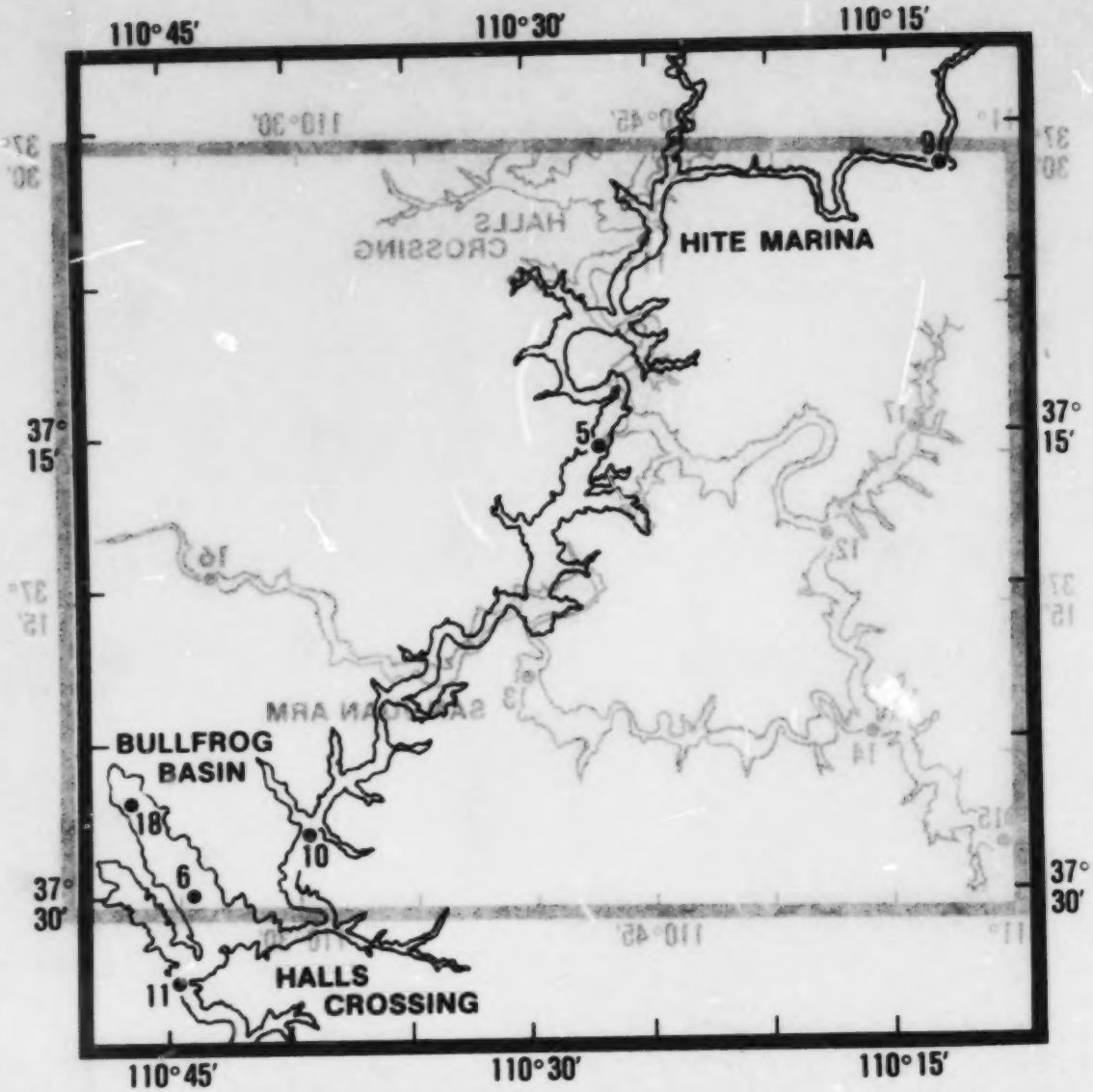


Figure 3. Station Locations, Lake Powell. Halls Crossing to Colorado River.

and nutrient analysis. Samples for chlorophyll a and phytoplankton samples were composited from several stations prior to analysis. Samples for algal assays were collected during the spring and fall sampling periods. These samples were composited from water collected at each sampling depth and from up to four stations. (A more complete discussion of sampling techniques is presented in NES Working Paper 175.) Physical and chemical lake data are presented in Appendix C and are summarized in the following table.

STORET CODE 0408

A. PHYSICAL AND CHEMICAL CHARACTERISTICS

PARAMETER		(4/15/75) S*** = 4			(8/14/75) S*** = 3			(12/ 2/75) S*** = 3		
	N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	N*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEG CENT)												
0.-1.5 M DEPTH	8	9.3- 11.0	9.9	0.0- 1.5	6	23.4- 25.3	24.4	0.0- 1.5	6	11.7- 13.2	12.2	0.0- 1.5
MAX DEPTH**	4	6.5- 7.6	6.9	42.7- 61.0	3	4.7- 6.9	5.9	61.0- 67.1	3	7.0- 11.7	7.4	41.1- 67.1
DISSOLVED OXYGEN (MG/L)												
0.-1.5 M DEPTH	8	9.4- 10.0	9.6	0.0- 1.5	5	7.6- 9.0	8.0	0.0- 1.5	6	6.4- 7.2	6.9	0.0- 1.5
MAX DEPTH**	4	5.8- 9.4	6.1	42.7- 61.0	3	5.6- 7.2	6.8	61.0- 67.1	3	2.8- 6.6	4.4	41.1- 67.1
CONDUCTIVITY (UMHOS)												
0.-1.5 M DEPTH	8	576.- 600.	586.	0.0- 1.5	6	879.- 945.	937.	0.0- 1.5	6	526.- 537.	530.	0.0- 1.5
MAX DEPTH**	4	637.- 658.	651.	42.7- 61.0	3	583.- 690.	656.	61.0- 67.1	3	503.- 542.	511.	41.1- 67.1
PH (STANDARD UNITS)												
0.-1.5 M DEPTH	8	7.8- 8.4	8.3	0.0- 1.5	6	8.5- 8.8	8.6	0.0- 1.5	6	8.0- 8.1	8.0	0.0- 1.5
MAX DEPTH**	4	7.7- 8.0	7.8	42.7- 61.0	3	7.8- 8.0	7.9	61.0- 67.1	3	7.6- 7.9	7.8	41.1- 67.1
TOTAL ALKALINITY (MG/L)												
0.-1.5 M DEPTH	8	124.- 131.	130.	0.0- 1.5	6	113.- 133.	126.	0.0- 1.5	6	121.- 126.	125.	0.0- 1.5
MAX DEPTH**	4	135.- 154.	149.	42.7- 61.0	3	125.- 140.	136.	61.0- 67.1	3	120.- 147.	138.	41.1- 67.1
TOTAL P (MG/L)												
0.-1.5 M DEPTH	8	0.010-0.017	0.011	0.0- 1.5	6	0.007-0.011	0.009	0.0- 1.5	6	0.006-0.010	0.008	0.0- 1.5
MAX DEPTH**	4	0.007-0.014	0.010	42.7- 61.0	3	0.007-0.016	0.009	61.0- 67.1	3	0.006-0.012	0.006	41.1- 67.1
DISSOLVED ORTHO P (MG/L)												
0.-1.5 M DEPTH	8	0.011-0.014	0.012	0.0- 1.5	6	0.008-0.013	0.009	0.0- 1.5	6	0.002-0.002	0.002	0.0- 1.5
MAX DEPTH**	4	0.011-0.019	0.015	42.7- 61.0	3	0.003-0.019	0.010	61.0- 67.1	3	0.002-0.004	0.002	41.1- 67.1
NO2+NO3 (MG/L)												
0.-1.5 M DEPTH	8	0.360-0.400	0.375	0.0- 1.5	6	0.170-0.220	0.175	0.0- 1.5	6	0.270-0.310	0.275	0.0- 1.5
MAX DEPTH**	4	0.390-0.660	0.640	42.7- 61.0	3	0.500-0.540	0.540	61.0- 67.1	3	0.260-0.560	0.530	41.1- 67.1
AMMONIA (MG/L)												
0.-1.5 M DEPTH	8	0.020-0.030	0.020	0.0- 1.5	6	0.020-0.040	0.030	0.0- 1.5	6	0.020-0.020	0.020	0.0- 1.5
MAX DEPTH**	4	0.020-0.020	0.020	42.7- 61.0	3	0.030-0.040	0.040	61.0- 67.1	3	0.020-0.020	0.020	41.1- 67.1
KJELDAHL N (MG/L)												
0.-1.5 M DEPTH	8	0.200-0.400	0.300	0.0- 1.5	6	0.200-0.200	0.200	0.0- 1.5	6	0.200-0.200	0.200	0.0- 1.5
MAX DEPTH**	4	0.200-0.400	0.350	42.7- 61.0	3	0.200-0.200	0.200	61.0- 67.1	3	0.200-0.200	0.200	41.1- 67.1
SECCHI DISC (METERS)	4	5.0- 7.0	5.3		3	4.6- 5.2	4.6		3	6.4- 15.2	7.6	

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

B. Physical Properties

1. Main Channel

Profiles and cross sections of temperature, dissolved oxygen, and conductivity along the axis of the Colorado River Channel are presented in Figures 4 through 13. Temperature and conductivity profiles are reproduced from continuous analog records; those for dissolved oxygen are interpolated between sampling depths. In April (Figure 4) the isotherms at depth tend to rise as you proceed downstream, indicative of upward displacement by inflowing cold, dense winter water. Reynolds and Johnson (1974) report that annual cold, saline, advective under flows from the Colorado River occur each winter which "flush" the bottom waters of the lake and replace it with cold, oxygenated water.

The August profiles (Figure 5) show a relatively deep, well developed thermocline. The high surface values at Stations 10 and 11 are difficult to account for. On the cross section (Figure 6) the 8° C isotherm is not encountered in the upper basin, indicative of displacement by summer runoff waters into the upper reaches of the lake.

In December (Figure 7) mixing is apparent to 35 to 40 meters throughout the lower basin. Very cold water is observed at Station 09 but either sinks below our sampling levels

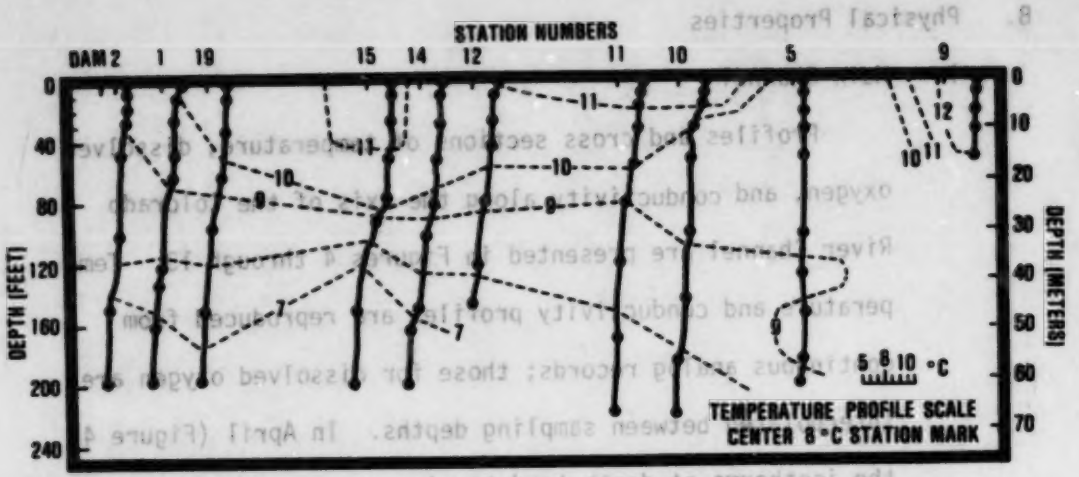


Figure 4. Temperature Profiles and Cross Section (Isotherms °C), Lake Powell Main Channel, April 1975.
o — pumped water sample.

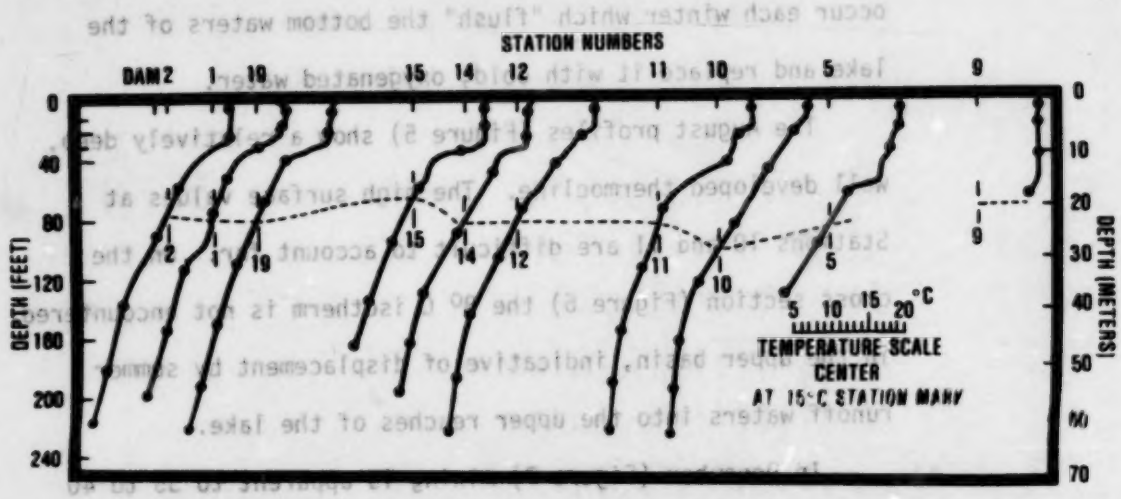


Figure 5. Temperature Profiles, Lake Powell Main Channel, August 1975.
Station location (|) and 15°C isotherm shown for reference;
o —pumped water sample.

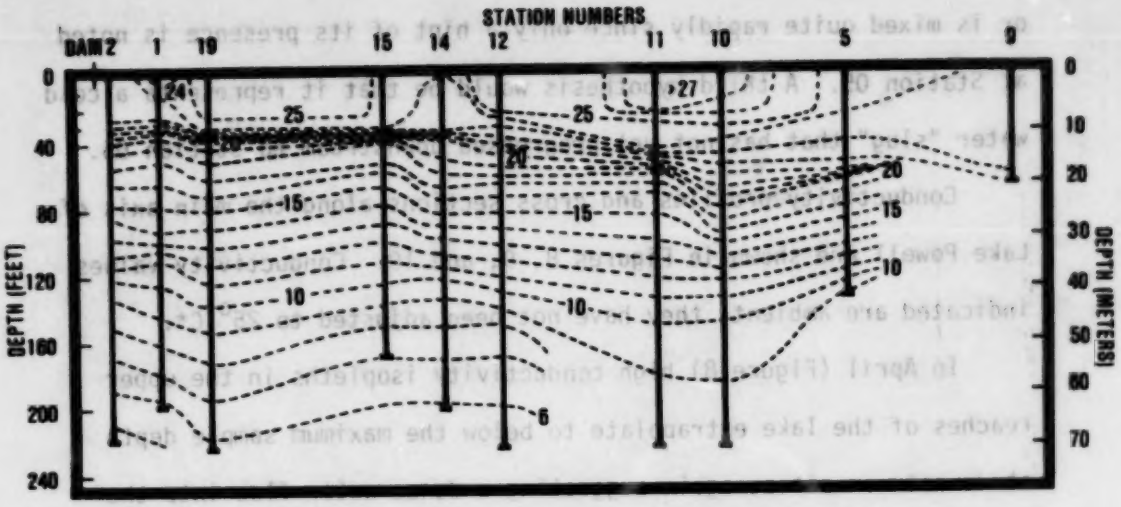


Figure 6. Temperature Cross Section (Isotherms °C), Lake Powell Main Channel, August 1975. Vertical lines indicate station location and depth of profile records.

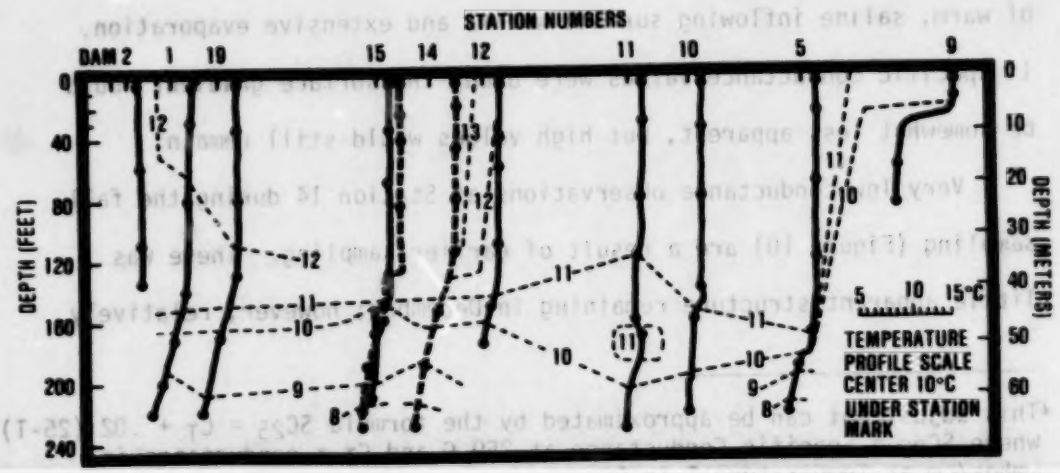


Figure 7. Temperature Profiles and Cross Section (Isotherms °C), Lake Powell Main Channel, November-December 1975. Solid profiles were obtained in December, dotted profiles in November; o — pumped water sample.

or is mixed quite rapidly since only a hint of its presence is noted at Station 05. A third hypothesis would be that it represents a cold water "slug" that has not yet progressed downstream to Station 05.

Conductivity profiles and cross sections along the main axis of Lake Powell are shown in Figures 8, 9, and 10. Conductivity values indicated are ambient; they have not been adjusted to 25° C*.

In April (Figure 8) high conductivity isopleths in the upper reaches of the lake extrapolate to below the maximum sample depth at downstream sites, again suggesting a dense water flow into the bottom layers of the lower basin. The higher surface conductivity values at Station 05 probably reflect the two week interval between sampling of Station 05 and adjacent stations.

Summer surface conductivities (Figure 9) are very high because of warm, saline inflowing surface waters and extensive evaporation. If specific conductance values were used, the surface gradient would be somewhat less apparent, but high values would still remain.

Very low conductance observations at Station 14 during the fall sampling (Figure 10) are a result of earlier sampling. There was little apparent structure remaining in December; however, relatively

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*This adjustment can be approximated by the formula $SC_{25} = C_T + .02\ (25-T)$ where SC_{25} = Specific Conductance at 25° C and C_T = conductance in µmhos/cm at Temperature T in °C.

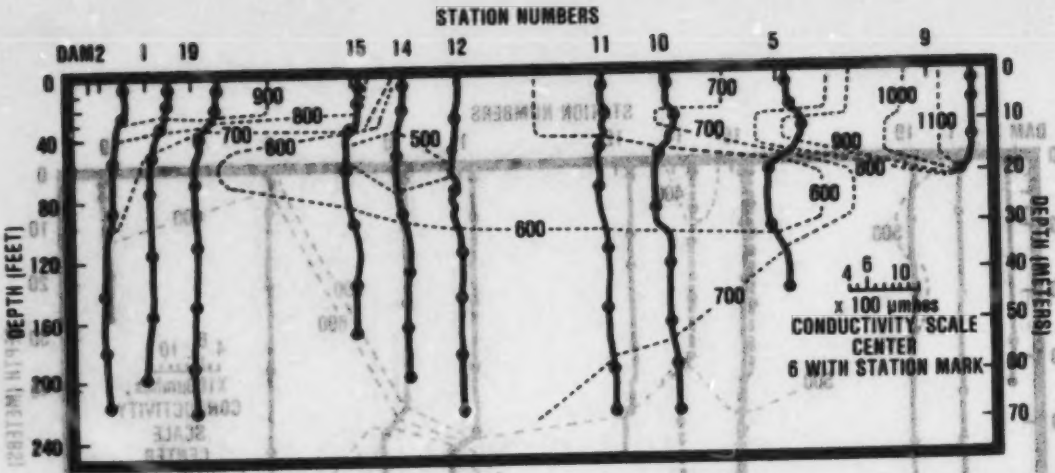


Figure 8. Ambient Conductivity Profiles and Cross Section (Isopleths in µmhos), Lake Powell Main Channel, April 1975.
o — pumped water sample.

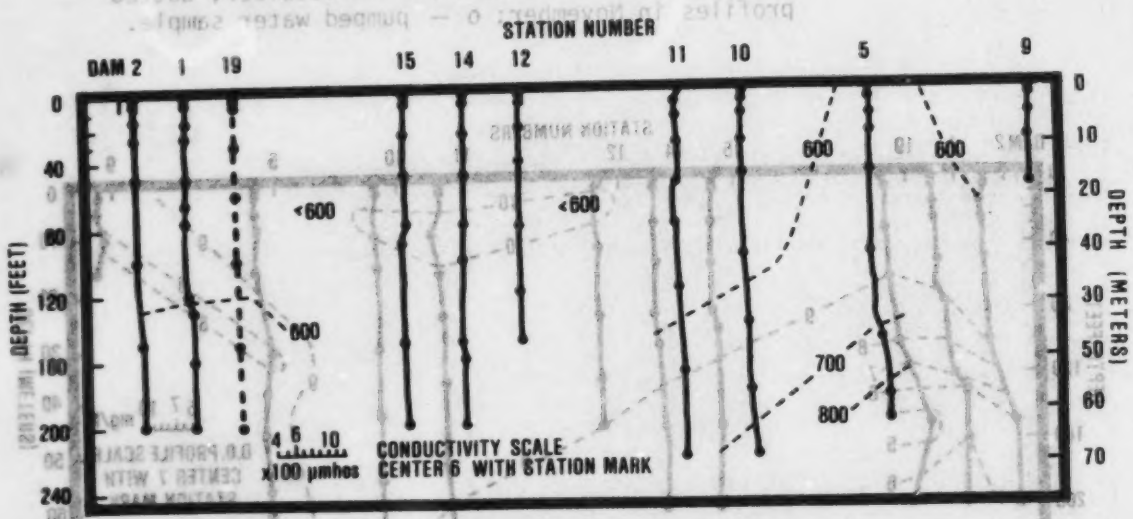


Figure 9. Ambient Conductivity Profiles and Cross Section (Isopleths in µmhos), Lake Powell Main Channel, August 1975
o — pumped water sample.

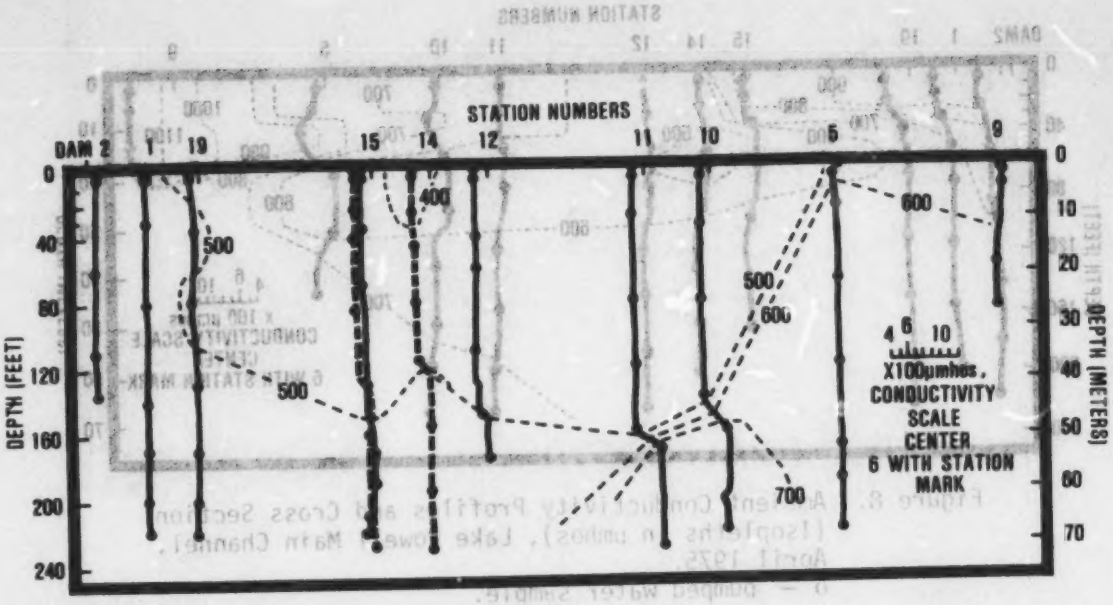


Figure 10. Ambient Conductivity Profiles and Cross Section (Isopleths in μmhos), Lake Powell Main Channel, November-December 1975
Solid profiles were obtained in December, dotted profiles in November; o — pumped water sample.

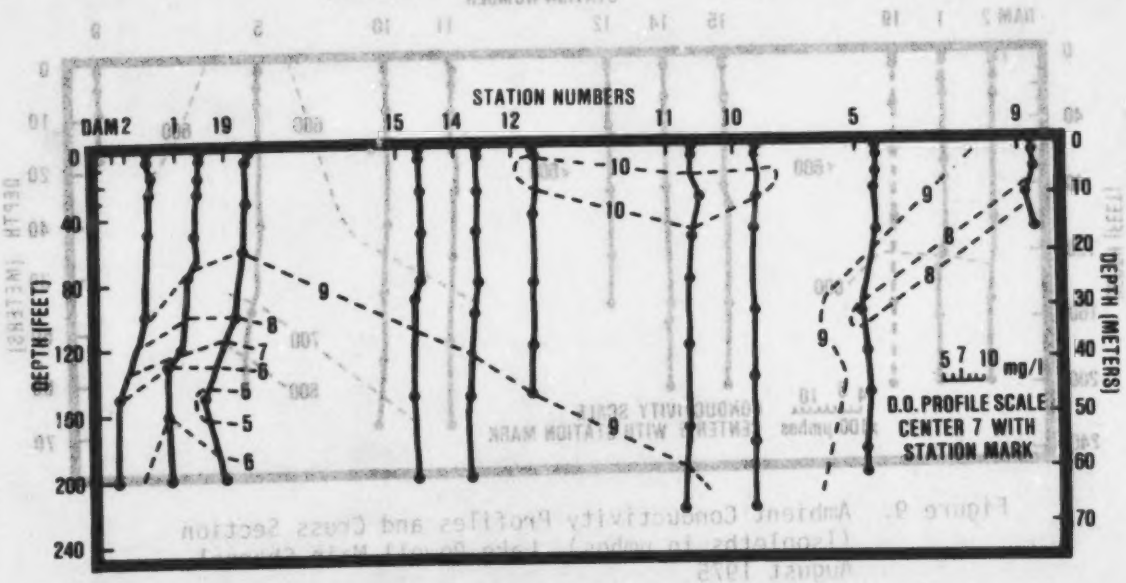


Figure 11. Dissolved Oxygen Profiles and Cross Section (Isopleths in mg/liter), Lake Powell Main Channel, April 1975.
o — pumped water sample.

saline water can be seen entering from the north.

Cross sections and profiles for dissolved oxygen are presented in Figures 11, 12, and 13. Profiles are interpolated between sampling depths. Spring values were relatively high. Less dissolved oxygen was found in the deeper waters of the lower basin, implying the presence of "older" water at those stations. The oxygen minimum observed at Stations 01 and 19 at about 50 meters depth appears to correspond to an old plateau canyon break prior to inundation. The minimum is more pronounced in the wider lake areas (Station 19), where there is a corresponding increase in the extent of the exposed ledge. Page and Johnson (1975) attribute the dissolved oxygen minimum to biological respiration of organic rain. During the summer sampling (Figure 12) the dissolved oxygen minimum observed in the upper 30 meters generally corresponds to the thermocline. In this instance biological respiration is, in all probability, the responsible agent. December sampling (Figure 12) found virtually no structure in the dissolved oxygen distribution other than a poorly developed deep oxycline at several stations at the 35-50 meter level.

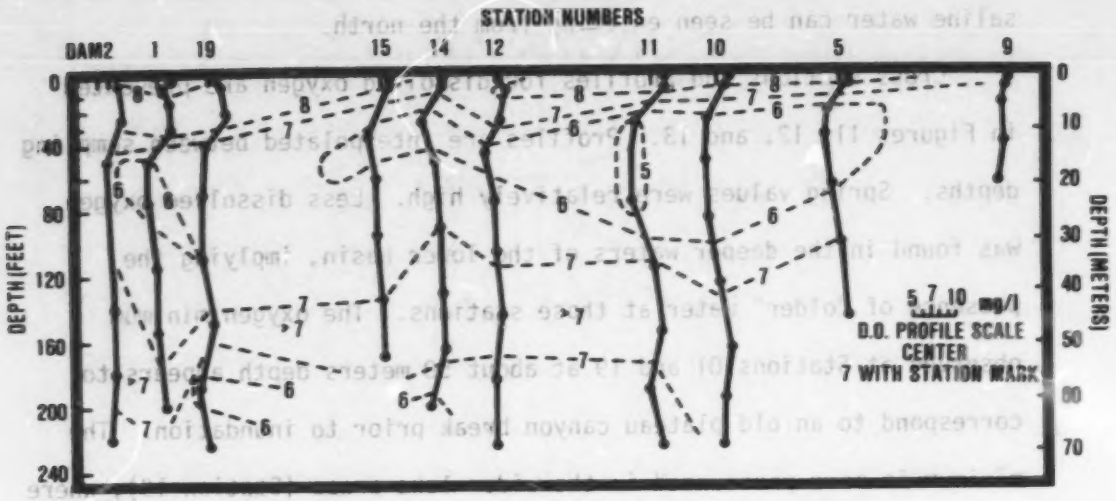


Figure 12. Dissolved Oxygen Profiles and Cross Section (Isopleths in mg/liter), Lake Powell Main Channel, August 1975.
o — pumped water sample.

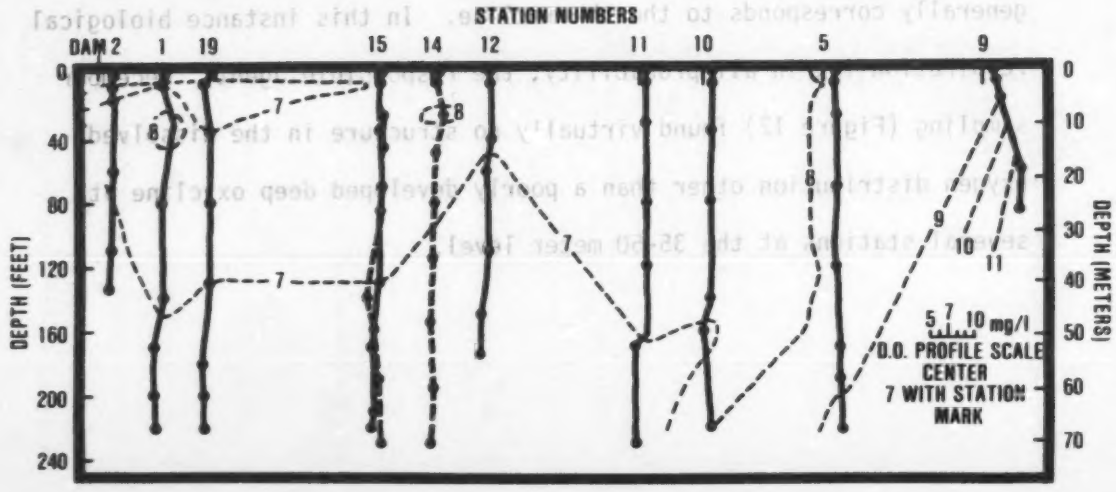


Figure 13. Dissolved Oxygen Profiles and Cross Section (Isopleths in mg/liter, Lake Powell Main Channel, November-December 1975

Profiles with o indicating the depth of pumped water samples were obtained in December, those with □ in November.

2. Tributary Arms

San Juan Arm

In April relatively warm, low salinity water from the San Juan River overflowed the colder, more saline waters of San Juan Arm. Warm surface waters (> 13° C) were found to about the 6 meter level at Station 16, the most upstream sampling station (Figure 2). By Station 13, about halfway down the Arm, the 13° C isotherm had risen to about 1.3 meters and the 12° C isotherm from 7 to 3.5 meters. Station 14, located at the mouth of the Arm, had no temperatures greater than 11° C. Temperatures averaged about 1° C higher at all depths in the San Juan Arm than at Station 14 the Colorado River Channel. These stations were sampled in sequence by the same flight team so sampling and/or temporal differences do not account for this discrepancy.

In August, the temperatures of the inflowing waters were quite high (23-25° C). Interestingly, the surface water at Station 13 midway along the Arm was warmer and less conductive than at either end.

Stations 13, 14, and 16 were sampled in November during the final round. Very low temperature, low conductivity waters from the San Juan River were found at Station 16. Stations 13 and 14 had warmer, more conductive water at all levels.

Escalante Canyon

Escalante Canyon is represented by Station 17 upstream and Station 12 near the canyon mouth in Lake Powell's main channel (Figure 2). In April, surface temperatures and conductivities were higher in the canyon than in Lake Powell proper, while at depth there was a slight reversal of this trend. During the summer, higher surface temperatures were found in the canyon while water temperatures at intermediate levels were similar to those in the open lake. Summer conductivity values obtained at Station 17 are suspect due to intermittent malfunction of the probe. Low dissolved oxygen levels were found at the bottom and at about 21 meters, the level of a submerged ledge. During the winter sampling, however, little difference was noted between the two stations. Within the canyon, an oxygen minimum occurred at about 42 meters depth.

Bullfrog Basin

Bullfrog Basin is represented by Station 18, located at the upper end of the Basin, Station 06, near Bullfrog Marina, and Station 11, situated in the main channel where Lake Powell necks down from the relatively wide lake area near Bullfrog (Figure 3). Because of their exposure, Stations 06 and 18 were reoccupied at slightly different locations on each sampling round to take advantage of windbreaks provided by the surrounding bluffs. In November, for instance, Station 06 was located nearly inside the Bullfrog anchorage area while in December it was near midchannel and in April somewhat favored the opposite (western)

side of the Basin. In April Station 06 was sampled 2 weeks earlier than Stations 11 and 18. During the fall sampling Station 11 was only visited in December while 06 and 18 were sampled both in November and December.

During the spring sampling, temperatures for the upper 15 to 18 meters were slightly less inside Bullfrog Basin than at Station 11. Below that level the water was apparently the same. There were no significant differences in conductivity or dissolved oxygen between the three stations. Values for pH were somewhat lower within Bullfrog Basin than in Lake Powell proper. During the August sampling, data from the three stations were very similar except for low dissolved oxygen values near the bottom at Station 18. During the November and December rounds there was little variation between stations although both pH and dissolved oxygen values were slightly higher inside the Basin. Between the November 25th and December 3rd samplings temperatures decreased about 2° C over the entire water column at Station 18, while conductivity and oxygen values increased slightly. The % saturation values of dissolved oxygen remained the same, however. At Station 06 both conductivity and temperature decreased markedly between the November and December samplings. (Temperature accounted for only about one-half of the conductivity change.) The observed changes at this site were probably due in part to the adjustment of station location.

Navajo Arm

Navajo Arm is represented by samples at Station 01, at the confluence with lower Lake Powell, and Station 04, about midway up its length (Figure 1). A planned station at the upper end of the Arm was deleted due to the very narrow canyon walls in that area. Water conditions were similar at both stations during the April and August sampling rounds although slightly higher temperatures and conductivities were present at Station 04 in August. A weak dissolved oxygen minimum was present at Station 04 at 45-48 meters on both rounds. In December the water above 36 meters at Station 04 was isothermal and low oxygen values were found at all levels. Conductivity values were higher at all depths inside the Arm than in Lake Powell proper, the difference increasing with depth.

C. Biological Characteristics:

Biological collection methods were described previously.

The data obtained are presented in the following tables:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal Units Per ml
04/16/75	1. Chroomonas?	513
	2. Fragilaria	428
	3. Cryptomonas	257
	4. Glenodinium	29
	Other genera	---
	Total	1,227
08/14/75	1. Fragilaria	816
	2. Chroomonas?	371
	3. Centric diatom	185
	4. Navicula	148
	5. Skeletonema	148
	Other genera	279
	Total	1,947
12/01/75	1. Chroomonas?	486
	2. Fragilaria	333
	3. Cryptomonas	26
	4. Tetraedron	26
	5. Scenedesmus	26
	Other genera	---
	Total	897

2. Chlorophyll a -

Station Number	Sampling Round:	Chlorophyll a (µg/l) April	August	Nov/Dec
01		---	2.2	---/0.8
02		1.0	2.1	---/0.5
03		1.0	2.2	---/0.9
04		0.5	2.6	---/0.8
05		2.5	4.7	---/1.5
06		1.5	7.3	1.9/0.8
07		---	1.8	---/0.7
08		1.5	---	---/---
09		2.0	23.6	---/1.4
10		1.2	5.8	---/1.1
11		1.7	6.7	---/0.9
12		1.2	4.7	---/1.1
13		1.3	4.5	1.7/---
14		0.9	5.3	1.9/---
15		1.2	4.3	2.2/0.9
16		1.5	8.7	9.2/---
17		1.5	3.9	---/0.9
18		1.5	6.3	2.1/1.3
19		1.3	2.7	---/1.5

D. Limiting Nutrient Study

1. Algal assay results on composited Lake Powell water that has been autoclaved, filtered, and nutrient spiked.*

a. Stations 06 and 08 - Date Sampled 4/16/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.006	0.440	0.1
0.050 P	0.056	0.440	5.1
0.050 P + 1.0 N	0.056	1.440	7.3
1.0 N	0.006	1.440	0.1

b. Station 09 Date Sampled 4/28/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	<0.005	0.556	0.1
0.050 P	<0.055	0.556	14.7
0.050 P + 1.0 N	<0.055	1.556	21.2
1.0 N	<0.005	1.556	0.4

c. Station 13 and 16 Date Sampled 4/28/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.015	0.490	4.0
0.050 P	0.065	0.490	16.7
0.050 P + 1.0 N	0.065	1.490	22.1
1.0 N	0.015	1.490	6.6

*See EPA, 1975.

d. Stations 12 and 17
Date Sampled 4/29/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	<0.005	0.375	0.2
0.050 P	<0.055	0.375	0.4
0.050 P + 1.0 N	<0.055	1.375	0.5
1.0 N	<0.005	1.375	0.2

e. Stations 11 and 18
Date Sampled 4/29/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.450	0.3
0.050 P	0.055	0.450	12.3
0.050 P + 1.0 N	0.055	1.450	19.0
1.0 N	0.005	1.450	0.2

f. Stations 14, 15, and 19
Date Sampled 4/28/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	<0.005	0.475	0.2
0.050 P	<0.055	0.475	13.2
0.050 P + 1.0 N	<0.055	1.475	13.6
1.0 N	<0.005	1.475	0.2

g. Stations 02, 03, 04, and 07
Date Sampled 12/1/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.320	0.1
0.050 P	0.055	0.320	0.1
0.050 P + 1.0 N	0.055	1.320	0.1
1.0 N	0.005	1.320	0.1

h. Stations 05, 09, and 10
Date Sampled 12/3/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.455	0.2
0.050 P	0.055	0.455	13.7
0.050 P + 1.0 N	0.055	1.455	18.6
1.0 N	0.005	1.455	0.2

i. Stations 11 and 17
Date Sampled 12/4/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.390	0.2
0.050 P	0.055	0.390	0.6
0.050 P + 1.0 N	0.055	1.390	0.6
1.0 N	0.005	1.390	0.3

j. Stations 13 and 16
Date Sampled 11/24/76

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.370	0.5
0.050 P	0.055	0.370	13.6
0.050 P + 1.0 N	0.055	1.370	21.0
1.0 N	0.005	1.370	0.4

k. Stations 06 and 18
Date Sampled 12/3/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.355	0.3
0.050 P	0.055	0.355	11.4
0.050 P + 1.0 N	0.055	1.355	15.6
1.0 N	0.005	1.355	0.3

1. Stations 01, 12, 15 and 19
Date Sampled 12/2/75

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.005	0.395	0.3
0.050 P	0.055	0.395	4.4
0.050 P + 1.0 N	0.055	1.395	1.1
1.0 N	0.005	1.395	0.2

2. Discussion -

The control yields of the assay alga, Selenastrum capricornutum*, indicate that potential primary productivity of Lake Powell was generally low at the time the samples were taken. The April composite samples from Stations 13 and 16 in the San Juan Arm contained elevated phosphorus levels due to San Juan River discharge at Station 16. The assay control yield from this sample was an order of magnitude greater than that from other stations. The increases in yield with orthophosphorus alone indicates that Lake Powell is limited by phosphorus. The addition of nitrogen alone resulted in yields which were not significantly different than those of the controls.

The reservoir data substantiate phosphorus limitation; i.e., the mean inorganic nitrogen to dissolved orthophosphorus ratios were 25/1 or greater at all stations on all sampling

*For further information regarding the algal assay test procedure and selection of test organisms, see U.S. EPA (1971).

rounds except for Stations 09 and 16 during the August sampling. Both of these stations are near the inlets of major river systems and were sampled near the time of maximum flow. Even these stations had ratios of 15/1 to 11/1 respectively. This range is one of transition from phosphorus to nitrogen limitation (N/P ratios of greater than 16/1 are indicative of phosphorus limitation.)

Several of the algal assays exhibited little or no response to addition of nutrients. Available data are insufficient to determine the cause of these anomalous results. However, possible explanations include the presence of a toxin or limitation by a nutrient other than nitrogen or phosphorus.

IV NUTRIENT LOADING

Stream sampling was not conducted for Lake Powell tributaries as part of the National Eutrophication Survey. However, by using USGS data available in STORET, EPA's water quality computer data bank, some estimates of loading can be obtained.

Loading estimates were made from STORET and other data using several different computational schemes for 1974, 1975, and long-term records. Data was adequate for computation on only three tributaries, the Colorado, Green, and San Juan Rivers. These three rivers, however, account for 98% of the entering flow. The three available monitoring sites are all at least 100 kilometers upstream from the lake. Because of this, and the nature of the available data, ranges of the computed loadings are provided in the following table:

A. Annual Nutrient Loading Ranges:

1. Inputs	Kg P/Yr.	Kg N/Yr.
Colorado River at Cisco, Utah	$10\text{-}14 \times 10^5$	$229\text{-}329 \times 10^5$
Green River at Green River, Utah	$23\text{-}30 \times 10^5$	$80\text{-}240 \times 10^5$
San Juan River at Mexican Hat, Utah	$5\text{-}14 \times 10^5$	$110\text{-}130 \times 10^5$
Total	$38\text{-}58 \times 10^5$	$419\text{-}699 \times 10^5$

2. Outputs	Kg P/Yr.	Kg N/Yr.
Lake Outlet, Colorado River at Lees Ferry, Arizona	$1-2 \times 10^5$	$238-292 \times 10^5$
3. Net Annual Accumulation	$36-57 \times 10^5$ kg	$127-461 \times 10^5$ kg

B. As can be seen, the lake is an effective nutrient trap. Most of the nutrients appear to be deposited very near to the inlets of the tributaries. Ambient total phosphorus and total nitrogen (NO_2 + NO_3 + Total Kjeldahl) concentrations (Appendix B) are markedly less at Station 16 than those observed in the San Juan River at Mexican Hat, and those at Station 09 are similarly less, except during the April sampling near the time of peak runoff. At Stations 13 and 05 the reductions in nutrient concentrations are even more dramatic.

C. Yearly Loads:

The calculated annual phosphorus loading from the rivers ranges from 5.8 to 8.9 $g/m^2/yr$ with over 97% of the phosphorus being retained by the lake. If these values are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974) they are an order of magnitude greater than his "eutrophic" loading level of 0.96 $g/m^2/yr$. Vollenweider postulates that at greater than his "eutrophic" loading level, receiving waters will become eutrophic. However, the rapid disappearance of the high incoming phosphorus concentrations suggests that most of the phosphorus

is being deposited near the stream mouths. It is probable that the effective loading, after consideration of this large sedimentation rate, would still be above the "eutrophic" level, but only slightly so. A progression towards more eutrophic conditions can be expected; however, the change should be relatively slow under present conditions.

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VI. APPENDICES

APPENDIX A

PARAMETRIC RANKINGS OF LAKES SAMPLED BY NES IN 1975

STATE OF ARIZONA

Mean or median values for six of the key parameters evaluated in establishing the trophic conditions of Arizona lakes sampled are presented to allow direct comparison of the ranking, by parameter, of each lake relative to the others. Median total phosphorus, median inorganic nitrogen and median dissolved orthophosphorus levels are expressed in mg/l. Chlorophyll a values are expressed in µg/l. To maintain consistent rank order with the preceding parameters, the mean Secchi disc depth, in inches, is subtracted from 500. Similarly, minimum dissolved oxygen values are subtracted from 15 to create table entries.

ARIZONA LAKES
LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
0401	BIG LAKE	0.032	0.090	386.000	2.900	9.000	0.007
0402	FOOLS HOLLOW	0.059	0.090	466.600	10.683	14.800	0.014
0403	LAKE HAVASU	0.015	0.170	420.231	3.948	10.800	0.005
0404	LUNA LAKE	0.182	0.050	396.250	3.400	12.200	0.131
0405	LYMAN LAKE	0.099	0.060	484.667	2.633	9.000	0.056
0406	LAKE MOHAVE	0.017	0.240	369.667	4.404	8.600	0.010
0407	LAKE PLEASANT	0.027	0.040	449.154	9.808	14.900	0.004
0408	LAKE POWELL	0.010	0.410	322.140	2.800	13.800	0.009
0409	PAINTED ROCK LAKE	0.046	0.045	440.750	16.367	12.000	0.009
0410	ROOSEVELT LAKE	0.020	0.040	429.917	4.073	14.000	0.008
0411	SAN CARLOS RESERVOIR	0.056	0.060	474.500	14.750	14.600	0.009

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
0401	BIG LAKE	50 (5)	35 (3)	80 (8)	80 (8)	85 (8)	80 (8)
0402	FOOLS HOLLOW	20 (2)	35 (3)	20 (2)	20 (2)	10 (1)	20 (2)
0403	LAKE HAVASU	90 (9)	20 (2)	60 (6)	60 (6)	70 (7)	90 (9)
0404	LUNA LAKE	0 (0)	70 (7)	70 (7)	70 (7)	50 (5)	0 (0)
0405	LYMAN LAKE	10 (1)	60 (6)	0 (0)	100 (10)	85 (8)	10 (1)
0406	LAKE MOHAVE	80 (8)	10 (1)	90 (9)	40 (4)	100 (10)	30 (3)
0407	LAKE PLEASANT	60 (6)	95 (9)	30 (3)	30 (3)	0 (0)	100 (10)
0408	LAKE POWELL	100 (10)	0 (0)	100 (10)	90 (9)	40 (4)	55 (5)
0409	RAINBOW LAKE	40 (4)	80 (8)	40 (4)	0 (0)	60 (6)	40 (4)
0410	ROOSEVELT LAKE	70 (7)	95 (9)	50 (5)	50 (5)	30 (3)	70 (7)
0411	SAN CARLOS RESERVOIR	30 (3)	50 (5)	10 (1)	10 (1)	20 (2)	55 (5)

UTAH LAKES

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
0409	LAKE POWELL	0.010	0.410	339.830	3.081	13.800	0.007
4901	BEAR LAKE	0.011	0.040	253.167	0.945	9.200	0.003
4902	LOWER BOWNS RESERVOIR	0.031	0.040	336.000	5.567	9.400	0.006
4903	DEER CREEK RESERVOIR	0.038	0.215	430.333	9.078	14.800	0.006
4904	ECHO RESERVOIR	0.047	0.170	450.333	6.967	14.000	0.012
4905	LYNN RESERVOIR	0.121	0.200	417.667	39.600	10.400	0.052
4906	FISH LAKE	0.023	0.040	152.000	12.483	10.400	0.004
4907	HUNTINGTON NORTH RESERVO	0.013	0.040	392.000	1.900	7.800	0.005
4908	JOES VALLEY RESERVOIR	0.012	0.045	400.000	2.483	11.200	0.003
4909	MINERSVILLE RESERVOIR	0.192	0.060	445.000	33.583	8.600	0.107
4910	MOON LAKE	0.008	0.040	381.000	2.700	9.600	0.002
4911	NAVAJO LAKE	0.016	0.040	368.000	2.000	6.000	0.003
4912	NEWCASTLE RESERVOIR	0.051	0.040	428.667	12.467	13.600	0.009
4913	OTTER CREEK RESERVOIR	0.067	0.040	453.667	11.767	10.600	0.033
4914	PANQUITCH LAKE	0.071	0.040	426.500	45.950	14.200	0.010
4915	PELICAN LAKE	0.044	0.050	438.500	6.350	8.400	0.004
4916	PINEVIEW RESERVOIR	0.028	0.300	435.083	5.692	14.600	0.006
4917	PIUTE RESERVOIR	0.047	0.150	482.625	25.329	11.600	0.007
4918	PORCUPINE RESERVOIR	0.025	0.110	440.000	7.860	12.400	0.011
4919	PRUESS RESERVOIR (GARRIS	0.057	0.140	491.000	4.533	8.800	0.008
4920	SEVIER BRIDGE RESERVOIR	0.026	0.355	449.778	18.222	12.400	0.008
4921	STARVATION RESERVOIR	0.016	0.040	394.583	5.675	13.200	0.004
4922	STEINAKER RESERVOIR	0.011	0.040	316.750	1.944	12.600	0.005
4923	TROPIC RESERVOIR	0.021	0.050	425.000	7.200	8.400	0.006
4924	UTAH LAKE	0.132	0.320	490.583	72.012	11.400	0.012
4925	WILLARD BAY RESERVOIR	0.044	0.060	457.182	7.567	11.000	0.009
5605	FLAMING GORGE RESERVOIR	0.011	0.690	285.636	2.500	10.400	0.003

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500- MEAN SEC	MEAN CHLORA	15- MIN DO	MEDIAN DISS ORTHO P
0405	LAKE POWELL	94 (25)	4 (1)	81 (21)	73 (19)	15 (4)	42 (11)
4901	BEAR LAKE	90 (23)	87 (19)	96 (25)	100 (26)	77 (20)	90 (23)
4902	LOWER BOWNS RESERVOIR	46 (12)	87 (19)	85 (22)	65 (17)	73 (19)	50 (13)
4903	DEER CREEK RESERVOIR	42 (11)	19 (5)	42 (11)	35 (9)	0 (0)	58 (14)
4904	ECHO RESERVOIR	31 (8)	27 (7)	19 (5)	50 (13)	12 (3)	13 (3)
4905	LYNN RESERVOIR	8 (2)	23 (6)	58 (15)	8 (2)	62 (15)	4 (1)
4906	FISH LAKE	62 (16)	65 (16)	100 (26)	23 (6)	62 (15)	79 (20)
4907	HUNTINGTON NORTH RESERVO	77 (20)	65 (16)	69 (18)	92 (24)	96 (25)	69 (18)
4908	JOE'S VALLEY RESERVOIR	81 (21)	58 (15)	62 (16)	85 (22)	46 (12)	96 (25)
4909	MINERSVILLE RESERVOIR	0 (0)	44 (11)	27 (7)	12 (3)	85 (22)	0 (0)
4910	MOON LAKE	100 (26)	87 (19)	73 (19)	77 (20)	69 (18)	100 (26)
4911	NAVAJO LAKE	69 (18)	87 (19)	77 (20)	88 (23)	100 (26)	85 (22)
4912	NEWCASTLE RESERVOIR	23 (6)	87 (19)	46 (12)	27 (7)	19 (5)	27 (7)
4913	OTTER CREEK RESERVOIR	15 (4)	87 (19)	15 (4)	31 (8)	54 (14)	8 (2)
4914	PANQUITCH LAKE	12 (3)	65 (16)	50 (13)	4 (1)	8 (2)	23 (6)
4915	PELICAN LAKE	37 (9)	54 (14)	35 (9)	54 (14)	90 (23)	73 (19)
4916	PINEVIEW RESERVOIR	50 (13)	15 (4)	38 (10)	58 (15)	4 (1)	58 (14)
4917	PIUTE RESERVOIR	27 (7)	31 (8)	8 (2)	15 (4)	38 (10)	46 (12)
4918	PORCUPINE RESERVOIR	58 (15)	38 (10)	31 (8)	38 (10)	33 (8)	19 (5)
4919	PRUESS RESERVOIR (GARRIS	19 (5)	35 (9)	0 (0)	69 (18)	81 (21)	37 (9)
4920	SEVIER BRIDGE RESERVOIR	54 (14)	8 (2)	23 (6)	19 (5)	33 (8)	37 (9)
4921	STARVATION RESERVOIR	73 (19)	87 (19)	65 (17)	62 (16)	23 (6)	79 (20)
4922	STEINAKER RESERVOIR	85 (22)	87 (19)	88 (23)	96 (25)	27 (7)	65 (17)
4923	TROPIC RESERVOIR	65 (17)	50 (13)	54 (14)	46 (12)	90 (23)	58 (14)
4924	UTAH LAKE	4 (1)	12 (3)	4 (1)	0 (0)	42 (11)	13 (3)
4925	WILLARD BAY RESERVOIR	37 (9)	44 (11)	12 (3)	42 (11)	50 (13)	31 (8)
4605	FLAMING GORGE RESERVOIR	90 (23)	0 (0)	92 (24)	81 (21)	62 (15)	90 (23)

APPENDIX B

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX C

PHYSICAL AND CHEMICAL DATA

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040801
36 58 45.0 111 23 05.0 3
LAKE POWELL
04005 ARIZONA

110591

11EPALES 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/15	14 30	0000	10.7	10.0	198	589	8.40	131	0.020	0.400	0.370	0.014J
	14 30	0005	10.1	9.8		581	8.30	130	0.020K	0.300	0.380	0.011J
	14 30	0015	9.8	9.8		578	8.30	128	0.020K	0.300	0.380	0.013K
	14 30	0025	9.8	9.7		577	8.30	129	0.020K	0.300	0.380	0.012K
	14 30	0050	9.6	9.2		576	8.30	132	0.020	0.300	0.380	0.012K
	14 30	0065	9.5	9.4		571	8.20	131	0.020K	0.200	0.380	0.013K
	14 30	0075	8.5	8.6		565	8.10	132	0.020	0.200	0.410	0.012K
	14 30	0120	7.9	7.4		599	7.80	145	0.020K	0.200	0.420	0.012K
	14 30	0130	7.4	6.0		635	7.70	146	0.020K	0.200	0.640	0.011K
	14 30	0160	6.9	6.0		645	7.70	149	0.020K	0.300	0.660	0.018K
	14 30	0200	6.7	6.2		657	7.90	154	0.020	0.200K	0.660	0.019K
75/08/14	13 15	0000	24.1	9.0	204	890	8.80	130	0.040	0.200	0.170	0.013
	13 15	0005	25.3	7.6		940	8.80	131	0.040	0.200K	0.170	0.009
	13 15	0015	25.1	8.2		940	8.70	134	0.030	0.200K	0.180	0.010
	13 15	0030	21.5	8.4		811	8.75	134	0.030	0.200	0.180	0.011
	13 15	0050	17.1	5.4		663	8.20	135	0.030	0.200	0.410	0.009
	13 15	0075	15.4	5.6		676	8.10	137	0.020	0.200	0.430	0.011
	13 15	0115	11.0	6.8		677	8.10	142	0.020	0.200K	0.400	0.011
	13 15	0155	8.5	6.8		638	8.10	147	0.030	0.200	0.430	0.012
	13 15	0200	5.4	7.2		583	8.00	125	0.040	0.200K	0.500	0.010
75/12/02	11 05	0000	13.2	7.2	600	533	8.00	125	0.020K	0.200K	0.240	0.002
	11 05	0005	12.5	7.0		526	8.00	125	0.020K	0.200K	0.270	0.002K
	11 05	0030	12.1	6.4		520	8.00	126	0.020K	0.200K	0.270	0.002K
	11 05	0080	11.4	7.0		508	8.00	125	0.020K	0.200K	0.260	0.002K
	11 05	0140	11.4	7.2		510	8.00	125	0.020	0.200K	0.240	0.002K
	11 05	0170	9.8	6.0		507	7.80	135	0.020K	0.200K	0.510	0.002K
	11 05	0200	8.3	6.2		507	7.80	135	0.020K	0.200K	0.520	0.002K
	11 05	0220	7.0	6.4		511	7.80	138	0.020K	0.200K	0.560	0.002K

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

40

STORET RETRIEVAL DATE 76/11/26
NATL EUTHOPHICATION SURVEY
EPA-LAS VEGAS

040801
36 58 45.0 111 23 05.0 3
LAKE POWELL
04005 ARIZONA
110541

11EMALES 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT RFMNING PERCENT
75/04/15	14	30 0000	0.017		
	14	30 0005	0.011		
	14	30 0015	0.012		
	14	30 0025	0.010		
	14	30 0050	0.011		
	14	30 0065	0.011		
	14	30 0075	0.009		
	14	30 0120	0.007		
	14	30 0130	0.008		
	14	30 0160	0.013		
	14	30 0200	0.014		
75/08/14	13	15 0000	0.011	2.2	
	13	15 0005	0.010		
	13	15 0015	0.012		
	13	15 0030	0.010		
	13	15 0050	0.011		
	13	15 0075	0.009		
	13	15 0115	0.009		
	13	15 0155	0.009		
	13	15 0200	0.009		
75/12/02	11	05 0000	0.006	0.8	
	11	05 0005	0.006		
	11	05 0030	0.006		
	11	05 0080	0.006		
	11	05 0140	0.006		
	11	05 0170	0.005		
	11	05 0200	0.005		
	11	05 0220	0.006		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040802
36 56 50.0 111 29 15.0 3
LAKE POWELL
04005 ARIZONA

110541

11EPALES 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/15	13	30 0000	9.3	9.7	204	576	8.30	128	0.030	0.200	0.340	0.01
	13	30 0005	9.4	9.6		577	7.80	130	0.020K	0.300	0.370	0.01
	13	30 0015	9.3	10.0		576	8.20	131	0.020K	0.300	0.370	0.01
	13	30 0025	9.2	9.8		571	8.20	129	0.020K	0.300	0.370	0.01
	13	30 0050	8.5	9.6		564	8.20	130	0.020	0.200	0.380	0.01
	13	30 0100	8.1	9.2		564	7.80	144	0.020K	0.200	0.630	0.01
	13	30 0150	7.0	6.0		637	7.80	146	0.020K	0.300	0.640	0.01
	13	30 0200	6.5	5.8		645	7.80	149	0.020K	0.400	0.660	0.01
75/08/14	10	00 0000	23.4	8.0	180	879	8.60	121	0.020	0.200	0.180	0.00
	10	00 0005	23.6			937	8.60	122	0.020	0.200	0.170	0.00
	10	00 0025	23.2	8.2		933	8.60	122	0.030	0.200	0.170	0.01
	10	00 0050	16.6	6.4		790	8.30	131	0.030	0.200	0.310	0.01
	10	00 0090	13.8			747	8.20	130	0.060	0.200	0.390	0.00
	10	00 0140	8.8	7.2		641	8.05	132	0.040	0.200	0.420	0.00
	10	00 0180	6.7	7.2		642	8.00	130	0.030	0.200	0.460	0.00
	10	00 0220	4.7	6.8		656	7.90	136	0.040	0.200K	0.540	0.00
75/12/01	15	30 0000	11.7	7.0	300	528	8.10	122	0.020	0.200K	0.270	0.00
	15	30 0005	11.7	6.9		528	8.00	121	0.020	0.200K	0.270	0.00
	15	30 0015	11.6	7.0		507	8.00	121	0.020	0.200K	0.270	0.00
	15	30 0060	11.7	7.0		502	8.00	119	0.020	0.200K	0.260	0.00
	15	30 0110	11.7	6.8		503	7.90	120	0.020	0.200K	0.260	0.00
	15	30 0135	11.7	6.6		503	7.90	120	0.020	0.200K	0.260	0.00

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

42

STORET RETRIEVAL DATE 76/11/26
NATL EUTHOPHICATION SURVEY
EPA-LAS VEGAS

040802
36 56 50.0 111 29 15.0 3
LAKE POWELL
04005 ARIZONA
110941

11EPALES 2111206
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/15	13	30 0000	0.017	1.0	
	13	30 0005	0.011		
	13	30 0015	0.011		
	13	30 0025	0.011		
	13	30 0050	0.009		
	13	30 0100	0.010		
	13	30 0150	0.010		
	13	30 0200	0.011		
75/08/14	10	00 0000	0.007	2.1	
	10	00 0005	0.007		
	10	00 0025	0.007		
	10	00 0050	0.008		
	10	00 0090	0.007		
	10	00 0140	0.006		
	10	00 0180	0.006		
	10	00 0220	0.007		
75/12/01	15	30 0000	0.009	0.5	
	15	30 0005	0.007		
	15	30 0015	0.006		
	15	30 0060	0.007		
	15	30 0110	0.007		
	15	30 0135	0.006		

43

STORET RETRIEVAL DATE 76/11/20
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040803
37 01 35.0 111 25 15.0 3
LAKE POWELL
49025 ARIZONA

110291

11EPALES 2111202
0144 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/15	15 30	0000	9.9	9.6	156	577	8.30	136	0.020	0.400	0.370	0.013
	15 30	0005	9.9	9.6		576	8.30	134	0.020K	0.200	0.360	0.012
	15 30	0015	9.8	9.6		577	8.30	134	0.020K	0.200	0.370	0.011
	15 30	0025	9.8	9.8		577	8.30	125	0.020	0.200K	0.380	0.012
	15 30	0045	9.8	9.6		577	8.30	125	0.020K	0.200	0.370	0.012
	15 30	0055	9.7	10.0		574	8.30	127	0.020K	0.200K	0.360	0.010
	15 30	0075	8.8	9.0		567	8.20	127	0.020K	0.200K	0.380	0.012
	15 30	0093						132	0.020	0.200K	0.450	0.012
	15 30	0100	8.3	8.4		572	8.10	128	0.020K	0.200K	0.430	0.013
	15 30	0130	8.1	7.8		577	7.90					
	15 30	0140	7.5	7.0		606	7.90	139	0.020	0.200	0.540	0.016
75/08/14	10 45	0000	24.9	8.0		954	8.55	122	0.020	0.200	0.140	0.002
	10 45	0005		8.2		952	8.60	123	0.020	0.200	0.170	0.002
	10 45	0025	24.1	8.4		916	8.60	127	0.020	0.200	0.220	0.010
	10 45	0050	17.3	6.6		756	8.30	130	0.020	0.200	0.370	0.013
	10 45	0090	14.3	5.8		747	8.10	133	0.050	0.200	0.420	0.010
	10 45	0130	10.8	5.8		694	7.95	135	0.030	0.200	0.460	0.010
	10 45	0161	8.3	5.4		685	7.90	137	0.020	0.200	0.490	0.010
75/12/02	09 00	0000	11.7	7.2	216	497	7.90	119	0.020K	0.200K	0.280	0.002
	09 00	0005	11.7	7.0		497	7.90	119	0.020	0.200K	0.280	0.002
	09 00	0030	11.7	7.2		507	8.00	118	0.020K	0.200K	0.280	0.002
	09 00	0080	11.8	7.0		504	8.00	119	0.020	0.200K	0.280	0.004
	09 00	0145	11.6	6.9		505	8.00	116	0.020K	0.200K	0.280	0.004

K VALUE KNOWN TO BE LESS THAN INDICATED

A-4
A

STORET RETRIEVAL DATE 76/11/20
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040803
37 01 35.0 111 25 15.0 3
LAKE POWELL
49025 ARIZONA

110291

11EMALES 2111206
0144 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LI REMNING PERCENT
75/04/15	15	30 0000	0.009	1.0	
	15	30 0005	0.008		
	15	30 0015	0.008		
	15	30 0025	0.007		
	15	30 0045	0.008		
	15	30 0055	0.008		
	15	30 0075	0.008		
	15	30 0095	0.008		
	15	30 0100	0.007		
	15	30 0140	0.011		
75/08/14	10	45 0000	0.006	2.6	
	10	45 0005	0.008		
	10	45 0025	0.008		
	10	45 0050	0.010		
	10	45 0090	0.007		
	10	45 0130	0.010		
	10	45 0161	0.011		
75/12/02	09	00 0000	0.007	0.9	
	09	00 0005	0.007		
	09	00 0030	0.012		
	09	00 0060	0.034		
	09	00 0145	0.039		

45

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040804
36 55 13.0 111 18 50.0 3
LAKE POWELL
04005 ARIZONA

110441

11EPALES 2111206
0176 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CONDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/15	17	00 0000	11.0	9.8	276		8.30	131	0.020	0.400	0.370	0.014
	17	00 0005	11.0	9.4			8.40	129	0.020K	0.200K	0.360	0.011
	17	00 0015	10.9	9.6			8.30	129	0.020K	0.200K	0.360	0.013
	17	00 0030	10.3	9.4			8.30	127	0.020K	0.200K	0.360	0.012
	17	00 0050	9.6	9.0			8.10	127	0.020	0.200K	0.370	0.012
	17	00 0075	8.5	8.0			8.10	130	0.020	0.200K	0.400	0.009
	17	00 0100	8.2	7.6			7.90	132	0.030	0.300	0.410	0.010
	17	00 0150	7.5	4.2			7.70	148	0.020K	0.300	0.600	0.011
	17	00 0174	7.2	6.0			7.70	149	0.020K	0.300	0.620	0.014
75/08/14	14	10 0000	25.2	8.0	180		8.50	133	0.030	0.200	0.220	0.010
	14	10 0005	24.8	8.2			8.60	113	0.030	0.200	0.220	0.010
	14	10 0015	24.6	8.2			8.60	115	0.030	0.200K	0.210	0.009
	14	10 0035	20.7	9.4			8.55	122	0.030	0.200	0.240	0.010
	14	10 0050	17.9	8.0			8.25	127	0.040	0.200	0.380	0.014
	14	10 0090	14.1	6.6			8.20	127	0.040	0.200	0.400	0.002
	14	10 0120	11.0	7.2			8.10	128	0.030	0.200	0.380	0.009
	14	10 0160	8.6	4.2		660	7.90	132	0.030	0.200	0.460	0.012
	14	10 0200	6.9	5.6		690	7.80	140	0.030	0.200K	0.540	0.019
75/12/02	09	45 0000	12.3	6.4	252	537	8.00	125	0.020K	0.200K	0.310	0.002
	09	45 0005	12.2	6.4		531	8.00	126	0.020K	0.200K	0.310	0.002
	09	45 0030	12.3	6.4		525	8.00	126	0.020K	0.200K	0.300	0.002
	09	45 0080	12.2	6.6		532	8.00	126	0.020	0.200K	0.300	0.002
	09	45 0120	12.2	6.2		528	7.90	126	0.020K	0.200K	0.300	0.002
	09	45 0170	9.8	3.2		524	7.80	134	0.020K	0.200K	0.470	0.002
	09	45 0200	8.4	2.8		523	7.60	144	0.020K	0.200K	0.480	0.004
	09	45 0220	7.4	2.8		542	7.60	147	0.020K	0.200K	0.530	0.004

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040804
36 55 13.0 111 18 50.0 3
LAKE POWELL
04005 ARIZONA

110591

11EPALES 2111202
0176 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT RFMNING PERCENT
75/04/15	17 00	0000	0.012	0.5	
	17 00	0005	0.010		
	17 00	0015	0.011		
	17 00	0030	0.008		
	17 00	0050	0.009		
	17 00	0075	0.007		
	17 00	0100	0.006		
	17 00	0150	0.006		
	17 00	0173	0.007		
75/08/14	14 10	0000	0.010	2.6	
	14 10	0005	0.009		
	14 10	0015	0.009		
	14 10	0035	0.010		
	14 10	0050	0.010		
	14 10	0090	0.009		
	14 10	0120	0.009		
	14 10	0160	0.011		
	14 10	0200	0.016		
75/12/02	09 45	0000	0.010	0.8	
	09 45	0005	0.009		
	09 45	0030	0.007		
	09 45	0060	0.007		
	09 45	0120	0.007		
	09 45	0170	0.016		
	09 45	0200	0.009		
	09 45	0220	0.012		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040805
37 44 40.0 110 27 00.0 3
LAKE POWELL
49037 ARIZONA

110291

11EPALES 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/16	09	25 0000	9.4	9.4	144	613	8.35	132	0.030	0.200K	0.470	0.014K
	09	25 0005	9.5	9.4		614	8.35	130	0.020	0.200K	0.470	0.013K
	09	25 0015	9.4	9.6		614	8.45	131	0.020	0.200K	0.470	0.012K
	09	25 0025	9.4	9.2		613	8.40	132	0.020	0.200K	0.470	0.011K
	09	25 0050	9.3	9.6		615	8.40	133	0.020	0.300	0.460	0.013K
	09	25 0100	9.3	7.8		620	8.40	140	0.030	0.200K	0.500	0.013K
	09	25 0125	9.0	8.4		666	8.40	141	0.030	0.200	0.500	0.014K
	09	25 0150	9.1	9.8		736	8.40	158	0.040	0.200K	0.580	0.016J
	09	25 0185	9.1	8.0		810	8.35	157	0.050	0.200K	0.580	0.018K
	09	25 0200	8.7	8.0		806	8.35	158	0.050	0.200	0.580	0.019J
75/08/15	08	30 0000	24.3	8.0	78	723	8.60	117	0.020	0.400	0.150	0.003
	08	30 0005	24.5	8.0		716	8.65	113	0.040	0.400	0.140	0.003
	08	30 0020	24.5	5.4		725	8.20	143	0.020K	0.300	0.440	0.002
	08	30 0035	23.5	5.2		972	8.10	143	0.050	0.400	0.440	0.003
	08	30 0065	17.6	5.8		490	8.00	115	0.040	0.300	0.350	0.008
	08	30 0100	13.3	7.0		541	8.00	137	0.020K	0.500	0.480	0.027
	08	30 0145	8.8	7.6		744	8.10	134	0.020K	0.300	0.540	0.015
75/12/03	10	05 0000	11.8	8.2	156	609	8.00	129	0.020K	0.200K	0.430	0.003
	10	05 0005	11.8	8.0		595	8.00	132	0.020K	0.200K	0.420	0.003
	10	05 0025	11.9	8.2		641	8.10	131	0.020K	0.200K	0.430	0.002
	10	05 0070	11.8	8.4		632	8.10	131	0.020K	0.200	0.430	0.002
	10	05 0120	11.8	8.0		629	8.10	129	0.020K	0.200K	0.420	0.002
	10	05 0170	11.0	8.8		631	8.10	137	0.020	0.200	0.470	0.004
	10	05 0190	9.2	8.8		637	8.10	142	0.020	0.200K	0.490	0.003
	10	05 0220	7.8	9.2		633	8.10	145	0.020	0.200K	0.510	0.003

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040805
37 44 40.0 110 27 00.0 3
LAKE POWELL
49037 ARIZONA
110291

11EPALES 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/16	09 25	0000	0.012	2.5	
	09 25	0005	0.010		
	09 25	0015	0.010		
	09 25	0025	0.009		
	09 25	0050	0.010		
	09 25	0100	0.012		
	09 25	0125	0.011		
	09 25	0150	0.017		
	09 25	0185	0.017		
	09 25	0200	0.020		
75/08/15	08 30	0000	0.012	4.7	
	08 30	0005	0.012		
	08 30	0020	0.011		
	08 30	0035	0.010		
	08 30	0065	0.015		
	08 30	0100	0.050		
	08 30	0145	0.025		
75/12/03	10 05	0000	0.010	1.5	
	10 05	0005	0.010		
	10 05	0025	0.012		
	10 05	0070	0.010		
	10 05	0120	0.010		
	10 05	0170	0.015		
	10 05	0190	0.014		
	10 05	0220	0.024		

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STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040806
37 30 00.0 110 44 00.0 3
LAKE POWELL
49025 ARIZONA

110291

11EPALES 2111202
0126 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/16	10 35	0000	10.1	8.4	216	581	8.45	127	0.040	0.600	0.420	0.016K
	10 35	0005	10.1	9.6		579	8.45	127	0.020	0.300	0.410	0.012K
	10 35	0015	10.1	9.8		580	8.45	127	0.020K	0.300	0.410	0.011J
	10 35	0025	9.9	9.2		578	8.40	130	0.030	0.200K	0.420	0.016K
	10 35	0060	9.6	9.4		574	8.40	129	0.030	0.200K	0.420	0.013K
	10 35	0070	9.1	9.4		573	8.40	127	0.030	0.300	0.430	0.011K
	10 35	0100	8.7	9.2		569	8.35	128	0.030	0.300	0.450	0.011
	10 35	0120	8.1	9.0		579	8.45	127	0.040	0.200	0.460	0.013K
75/08/15	16 10	0000	27.1	8.0	84	602	8.95	106	0.020K	0.300	0.040	0.012
	16 10	0005	27.5	8.4		600	8.95	107	0.020K	0.200	0.040	0.012
	16 10	0022	26.5	3.8		591	8.80	108	0.030	0.300	0.070	0.005
	16 10	0045	22.5	7.2		517	7.90	113	0.020	0.200	0.360	0.011
	16 10	0085	17.0	5.4		558	7.90	119	0.030	0.200	0.430	0.014
	16 10	0125	11.5	6.4		700	8.00	140	0.020	0.200	0.510	0.007
	16 10	0168	9.8	7.0		730	8.00	143	0.020K	0.200	0.590	0.007
75/11/25	09 00	0000	14.1		180	540		121	0.020	0.300	0.310	0.005
	09 00	0005	14.1	6.4		540		119	0.020K	0.200K	0.300	0.002K
	09 00	0015	14.1	7.4		542		118	0.020K	0.200K	0.300	0.002K
	09 00	0025	14.1	7.0		544		117	0.020K	0.200K	0.300	0.003
	09 00	0038	14.1	7.4		543		118	0.020K	0.200K	0.300	0.002K
75/12/03	15 15	0000	11.4	8.0	156	452	8.00	119	0.020K	0.200K	0.360	0.002K
	15 15	0005	11.5	7.2		460	8.00	118	0.020K	0.200K	0.360	0.002
	15 15	0025	11.5	7.6		460	8.00	117	0.020K	0.200K	0.360	0.002K
	15 15	0060	11.6	7.8		450	8.00	117	0.020K	0.200	0.360	0.005
	15 15	0110	11.5	8.0		438	8.00	120	0.020K	0.200K	0.350	0.002
	15 15	0145	10.2	7.4		495	8.00	122	0.020K	0.200K	0.380	0.002

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

50A

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040806
37 30 00.0 110 44 00.0 3
LAKE POWELL
49025 ARIZONA

110291

11EPALES 2111202
0126 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/16	10 35	0000	0.011	1.5	
	10 35	0005	0.011		
	10 35	0015	0.011		
	10 35	0025	0.011		
	10 35	0060	0.010		
	10 35	0070	0.008		
	10 35	0100	0.008		
	10 35	0120	0.008		
75/08/15	16 10	0000	0.011	7.3	
	16 10	0005	0.010		
	16 10	0022	0.009		
	16 10	0045	0.009		
	16 10	0085	0.012		
	16 10	0125	0.013		
	16 10	0168	0.013		
75/11/25	09 00	0000	0.013	1.9	
	09 00	0005	0.009		
	09 00	0015	0.008		
	09 00	0025	0.008		
	09 00	0038	0.009		
75/12/03	15 15	0000	0.009	0.8	
	15 15	0005	0.009		
	15 15	0025	0.008		
	15 15	0060	0.009		
	15 15	0110	0.012		
	15 15	0145	0.012		

51

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040807
37 00 30.0 111 29 15.0 3
LAKE POWELL
49025 ARIZONA

110291

11EPALES 2111202
0136 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/16	13 30	0000	10.4	7.6	204	589	8.50	132	0.030	0.500	0.360	0.016K
	13 30	0025	10.0	9.8		582	8.45	135	0.020K	0.300	0.360	0.010J
	13 30	0050	8.6	9.6		564	8.40	135	0.020K	0.200	0.380	0.013K
	13 30	0075	8.2	9.2		565	8.30	136	0.020K	0.200	0.390	0.011K
	13 30	0100	8.0	8.4		570	8.30	136	0.030	0.200	0.410	0.022K
	13 30	0130	7.3	8.2		583	8.15	138	0.020	0.200	0.470	0.014
75/08/14	08 25	0000	23.7	7.4	180	937	8.60	126	0.020	0.300	0.160	0.009
	08 25	0005	23.9	7.8		938	8.65	126	0.020K	0.300	0.170	0.002K
	08 25	0015	23.6	7.6		936	8.65	126	0.020	0.300	0.160	0.010
	08 25	0025	23.8	7.6		934	8.65	126	0.020	0.400	0.170	0.010
	08 25	0050	17.3	6.8		802	8.40	136	0.060	0.400	0.290	0.010
	08 25	0100	13.0	6.4		720	8.20	137	0.030	0.300	0.370	0.010
	08 25	0140	9.5	4.2		679	8.10	137	0.020	0.400	0.410	0.010
	08 25	0185	7.5	5.8		674	7.95	142	0.020K	0.200K	0.480	0.006
	08 25	0220	5.7	5.0		708	7.85	147	0.020K	0.200K	0.540	0.010
75/12/02	08 15	0000	11.5	7.0	156	609	7.70	119	0.020	0.200K	0.260	0.002K
	08 15	0005	11.4	7.2		609	7.80			0.200K		
	08 15	0030	12.6	7.4		604	7.90	119	0.030	0.200K	0.260	0.004
	08 15	0060	12.6	7.6		604	7.90	121	0.030	0.200K	0.260	0.002K
	08 15	0110	12.6	7.2		603	7.90	121	0.020	0.400	0.260	0.002K
	08 15	0170	12.5	6.4		625	7.90	124	0.020K	0.200	0.310	0.002K
	08 15	0215	9.7	2.4		648	7.80	138	0.020K	0.200K	0.510	0.002K

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/25
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040807
37 00 30.0 111 29 15.0 3
LAKE POWELL
49025 ARIZONA

110291

11EPALES 2111202
0136 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/16	13 30	0000	0.009		
	13 30	0025	0.010		
	13 30	0050	0.010		
	13 30	0075	0.008		
	13 30	0100	0.007		
	13 30	0130	0.008		
75/08/14	08 25	0000	0.008	1.8	
	08 25	0005	0.007		
	08 25	0015	0.007		
	08 25	0025	0.009		
	08 25	0050	0.008		
	08 25	0100	0.008		
	08 25	0140	0.007		
	08 25	0185	0.009		
	08 25	0220	0.013		
75/12/02	08 15	0000	0.007	0.7	
	08 15	0005	0.008		
	08 15	0030	0.008		
	08 15	0080	0.007		
	08 15	0110	0.006		
	08 15	0170	0.008		
	08 15	0215	0.008		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040808
37 00 35.0 111 18 20.0 3
LAKE POWELL
04037 ARIZONA

1102-1

11EPALES 2111202
0148 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/16	14 50	0000	9.8	10.0	216	578	8.45	125	0.030	0.400	0.400	0.013K
	14 50	0005	9.8	9.4		578	8.45	124	0.020K	0.200K	0.400	0.011K
	14 50	0015	9.8	9.2		578	8.45	125	0.020	0.200K	0.400	0.015K
	14 50	0025	9.8	9.0		577	8.45	126	0.020K	0.200K	0.340	0.011K
	14 50	0045	9.7	7.6		576	8.30	127	0.020	0.200K	0.430	0.012K
	14 50	0065	8.5	8.0		568	8.25	129	0.020	0.200K	0.460	0.015K
	14 50	0100	8.3	6.2		576	8.00	146	0.020K	0.400	0.600	0.012K
	14 50	0140	7.6	9.4		637	8.00	135	0.020K	0.400	0.390	0.011K

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/16	14 50	0000	0.011	1.5	
	14 50	0005	0.010		
	14 50	0015	0.009		
	14 50	0025	0.009		
	14 50	0045	0.009		
	14 50	0065	0.008		
	14 50	0100	0.010		
	14 50	0140	0.010		

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040809
37 53 45.0 110 12 40.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0056 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/ P
75/04/28	14 55	0000	12.6	8.6	8	584	8.00	137	0.060	0.800	0.730	0.015J
	14 55	0005	12.6	8.6		583	8.00	140	0.040	0.400	0.670	0.022J
	14 55	0015	12.3	8.8		578	8.00	134	0.050	0.300	0.670	0.021J
	14 55	0030	12.1	7.8		566	7.80	134	0.050	0.300	0.670	0.019J
	14 55	0052	12.0	8.8		567	7.90	136	0.050	0.400	0.680	0.013J
75/08/15	07 40	0000	23.1	7.2	23	1186	8.50	157	0.040	0.500	0.280	0.014
	07 40	0005	23.3	7.0		1189	8.55	157	0.040	0.500	0.270	0.015
	07 40	0015	23.2	6.8		1189	8.55	157	0.040	0.500	0.260	0.027
	07 40	0040	23.2	7.0		1194	8.50	158	0.050	0.400	0.260	0.024
	07 40	0066	22.1	6.2		1086	8.40	155	0.060	0.500	0.300	0.030
75/12/03	09 30	0000	10.0	8.2	84	665	7.60	136	0.020K	0.200K	0.450	0.002
	09 30	0005	10.0	8.6		665	7.90	138	0.020K	0.200K	0.450	0.003
	09 30	0015	10.0	9.0		629	7.90	138	0.020	0.200K	0.460	0.003
	09 30	0060	2.5	11.8		577	8.00	157	0.040	0.200	0.640	0.004
	09 30	0085	2.2	11.4		579	8.00	158	0.040	0.200	0.650	0.004

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/28	14 55	0000	0.144	2.0	
	14 55	0005	0.096		
	14 55	0015	0.048		
	14 55	0030	0.140		
	14 55	0052	0.175		
75/08/15	07 40	0000	0.032	23.6	
	07 40	0005	0.032		
	07 40	0015	0.028		
	07 40	0040	0.032		
	07 40	0066	0.036		
75/12/03	09 30	0000	0.013	1.4	
	09 30	0005	0.013		
	09 30	0015	0.013		
	09 30	0060	0.016		
	09 30	0085	0.033		

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040810
37 32 05.0 110 39 07.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111292
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/28	15	0000	11.6	9.8	162	580	8.30	135	0.030	0.400	0.410	0.009J
	15	0005	11.5	9.6		582	8.40	134	0.020K	0.300	0.400	0.008J
	15	0015	11.2	10.0		580	8.30	141	0.020K	0.300	0.400	0.006J
	15	0030	10.0	10.0		565	8.30	136	0.020	0.200	0.410	0.012K
	15	0050	9.6	9.6		571	8.30	138	0.020	0.200	0.430	0.012K
	15	0100	9.2	9.6		579	8.30	140	0.030	0.200	0.460	0.005J
	15	0140	8.5	9.2		634	8.20	151	0.040	0.300	0.520	0.015K
	15	0180	7.9	9.2		666	8.20	156	0.040	0.200	0.580	0.019K
	15	0220	7.3	9.2		702	8.20	164	0.040	0.200	0.640	0.016J
75/08/15	14	0000	27.1	8.4	96	628	8.95	98	0.060	0.200	0.060	0.013
	14	0005	27.4	8.0		621	8.90	101	0.030	0.200	0.060	0.011
	14	0025	25.8	5.8		714	8.10	111	0.040	0.200	0.280	0.011
	14	0050	22.5	5.4		564	7.90	104	0.020	0.200K	0.360	0.006
	14	0085	17.1	5.6		485	7.90	108	0.030	0.300	0.390	0.019
	14	0125	11.9	6.8		672	8.10	132	0.030	0.200	0.480	0.005
	14	0165	9.4	8.2		681	8.10	136	0.020	0.200K	0.510	0.004
	14	0195	8.9	7.6		733	8.10	152	0.030	0.300	0.550	0.007
	14	0225	8.6	7.2		776	8.00	150	0.020	0.200	0.590	0.009
75/12/03	14	0000	11.7	7.8	216	483	8.10	116	0.020K	0.200K	0.360	0.002
	14	0005	11.7	8.0		479	8.00	116	0.020K	0.200K	0.350	0.002
	14	0035	11.7	7.8		465	8.00	116	0.020K	0.200K	0.350	0.002K
	14	0080	11.6	7.8		477	8.00	117	0.020K	0.200K	0.350	0.002K
	14	0140	11.6	7.8		485	8.00	118	0.020K	0.200K	0.360	0.002
	14	0160	10.5	6.8		775	8.00	148	0.020K	0.200	0.570	0.005
	14	0220	9.7	8.0		738	8.00	150	0.020K	0.200K	0.550	0.005

K VALUE KNOWN TO BE LESS
THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040810
37 32 05.0 110 39 07.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/28	15 30	0000	0.016	1.2	
	15 30	0005	0.013		
	15 30	0015	0.013		
	15 30	0030	0.010		
	15 30	0050	0.009		
	15 30	0100	0.009		
	15 30	0140	0.011		
	15 30	0180	0.011		
	15 30	0220	0.016		
75/08/15	14 45	0000	0.012	5.8	
	14 45	0005	0.012		
	14 45	0025	0.010		
	14 45	0050	0.009		
	14 45	0085	0.016		
	14 45	0125	0.010		
	14 45	0165	0.009		
	14 45	0195	0.010		
	14 45	0225	0.013		
75/12/03	14 05	0000	0.009	1.1	
	14 05	0005	0.007		
	14 05	0035	0.009		
	14 05	0080	0.009		
	14 05	0140	0.009		
	14 05	0160	0.013		
	14 05	0220	0.014		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040811
37 27 12.0 110 44 55.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/29	10 10	0000	11.5	9.8	162	583	8.60	138	0.020K	0.200	0.380	0.013J
	10 10	0005	11.2	9.8		574	8.55	138	0.020K	0.200	0.390	0.003J
	10 10	0015	11.0	9.8		575	8.60	139	0.020K	0.300	0.390	0.014K
	10 10	0030	10.8	11.0		573	8.50	137	0.020K	0.300	0.390	0.014K
	10 10	0055	10.3	9.8		562	8.50	138	0.020K	0.200K	0.400	0.012K
	10 10	0080	8.7	9.4		552	8.40	137	0.020	0.200K	0.440	0.006J
	10 10	0120	8.2	9.4		591	8.35	144	0.030	0.200	0.500	0.013K
	10 10	0170	7.8	9.4		639	8.35	135	0.040	0.200K	0.560	0.015K
	10 10	0220	7.1	8.8		669	8.30	143	0.030	0.200K	0.620	0.009J
75/08/15	16 40	0000	27.5	8.6	96	603	9.00	101	0.030	0.300	0.040	0.003
	16 40	0005	27.8	8.8		598	9.00	102	0.020	0.300	0.020K	0.011
	16 40	0025	25.3	5.0		625	8.30	107	0.030	0.300	0.220	0.009
	16 40	0045	23.9	4.2		540	7.90	105	0.030	0.300	0.320	0.010
	16 40	0075	15.3	4.2		556	7.80	127	0.020	0.200	0.460	0.012
	16 40	0115	12.7	7.2		662	8.10	128	0.020	0.200	0.470	0.008
	16 40	0155	9.8	8.0		661	8.05	133	0.020	0.300	0.500	0.007
	16 40	0190	8.9	6.2		705	8.05	140	0.030	0.300	0.550	0.004
	16 40	0225	8.6	8.0		735	8.10	144	0.020	0.400	0.580	0.005
75/12/03	09 00	0000	11.8	7.6	240	425	7.50	116	0.020K	0.200K	0.390	0.003
	09 00	0005	11.8	7.4		426	7.50	116	0.020K	0.200K	0.380	0.004
	09 00	0030	11.8	7.4		430	7.60	118	0.020K	0.200K	0.380	0.002
	09 00	0080	11.4	7.6		424	7.70	117	0.020K	0.200K	0.330	0.002K
	09 00	0120	10.8	7.6		425	7.60	118	0.020K	0.200	0.270	0.002K
	09 00	0160	10.7	7.8		450	7.70	119	0.020K	0.200K	0.290	0.002
	09 00	0170	11.2	6.2		761	7.60	152	0.020K	0.200	0.600	0.007
	09 00	0230	9.4	6.4		738	7.80	154	0.020K	0.200	0.600	0.009

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040811
37 27 12.0 110 44 55.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/29	10 10	0000	0.015	1.7	
	10 10	0005	0.011		
	10 10	0015	0.013		
	10 10	0030	0.012		
	10 10	0055	0.010		
	10 10	0080	0.008		
	10 10	0120	0.008		
	10 10	0170	0.009		
	10 10	0220	0.012		
75/08/15	16 40	0000	0.011	6.7	
	16 40	0005	0.011		
	16 40	0025	0.010		
	16 40	0045	0.009		
	16 40	0075	0.009		
	16 40	0115	0.009		
	16 40	0155	0.008		
	16 40	0190	0.008		
	16 40	0225	0.009		
75/12/03	09 00	0000	0.013	0.9	
	09 00	0005	0.009		
	09 00	0030	0.009		
	09 00	0080	0.008		
	09 00	0120	0.008		
	09 00	0160	0.010		
	09 00	0170	0.018		
	09 00	0230	0.021		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040812
37 17 43.0 110 52 30.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0152 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/29	10 00	0000	11.1	9.6	240	755	8.50	120	0.020K	0.500	0.360	0.005J
	10 00	0005	11.0	10.0		761	8.50	120	0.020K	0.300	0.370	0.011J
	10 00	0025	10.3	10.0		744	8.55	122	0.020K	0.400	0.370	0.012K
	10 00	0040	10.0	9.6		768	8.40	124	0.020K	0.400	0.390	0.014K
	10 00	0080	9.2	9.6		773	8.40	124	0.020K	0.400	0.410	0.012K
	10 00	0120	8.1	9.2		837	8.25	136	0.020K	0.200K	0.450	0.009K
	10 00	0148	7.1	9.0		827	8.25	140	0.020K	0.200	0.520	0.009J
75/08/14	18 15	0000	25.7	7.2	120	597	9.00	101	0.020	0.200	0.020	0.005
	18 15	0005	25.8	8.2			9.00	101	0.030	0.400	0.020K	0.010
	18 15	0025	23.8	7.4		559	8.45	99	0.020	0.200	0.080	0.005
	18 15	0045	20.1	5.6		507	8.10	115	0.020	0.200	0.400	0.005
	18 15	0075	15.8	6.6		578	8.10	126	0.030	0.200	0.480	0.006
	18 15	0105	12.6	6.8		646	8.10	126	0.020K	0.200	0.460	0.002
	18 15	0145	8.4	7.4		650	8.10	132	0.020	0.200	0.460	0.003
	18 15	0185	6.5	6.8		651	8.10	133	0.030	0.200	0.500	0.004
	18 15	0225	5.6	6.2		672	8.20	138	0.020	0.200	0.540	0.004
75/12/03	15 30	0000	12.2	7.0	264	425	8.00	115	0.020K	0.400	0.350	0.002K
	15 30	0005	12.1	7.0		416	7.90	115	0.020K	0.200K	0.380	0.002K
	15 30	0040	11.8	7.2		408	8.00	112	0.020K	0.200K	0.360	0.002
	15 30	0060	11.8	6.8		404	7.90	112	0.020K	0.200K	0.350	0.002K
	15 30	0110	11.8	7.0		402	7.90	112	0.020K	0.200K	0.350	0.002K
	15 30	0150	10.7	6.0		520	7.80			0.200K		
	15 30	0175	9.6	6.0		530	7.90	132	0.020K	0.200K	0.520	0.004

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

60

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040812
37 17 43.0 110 52 30.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0152 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/29	10 00	0000	0.010	1.2	
	10 00	0005	0.011		
	10 00	0025	0.010		
	10 00	0040	0.010		
	10 00	0060	0.009		
	10 00	0120	0.007		
	10 00	0148	0.009		
75/08/14	18 15	0000	0.012	4.7	
	18 15	0005	0.013		
	18 15	0025	0.011		
	18 15	0045	0.008		
	18 15	0075	0.008		
	18 15	0105	0.008		
	18 15	0145	0.009		
	18 15	0185	0.009		
	18 15	0225	0.009		
75/12/03	15 30	0000	0.018	1.1	
	15 30	0005	0.008		
	15 30	0040	0.007		
	15 30	0060	0.006		
	15 30	0110	0.007		
	15 30	0150	0.009		
	15 30	0175	0.012		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040813
37 12 16.0 110 39 42.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0160 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/28	14	35 0000	13.0	9.8	204	599	8.50	120	0.030	0.700	0.410	0.000R
	14	35 0005	12.8	9.2		595	8.50	120	0.020	0.200K	0.400	0.015J
	14	35 0010	12.2	9.4		586	8.40	121	0.020	0.200K	0.400	0.015J
	14	35 0015	11.8	9.4		581	8.40	120	0.020K	0.200K	0.410	0.017J
	14	35 0025	11.7	9.6		578	8.40	117	0.020K	0.200K	0.410	0.015J
	14	35 0050	10.8	9.4		572	8.20	116	0.020	0.200K	0.420	0.014K
	14	35 0090	10.6	8.8		653	8.40	127	0.040	0.200K	0.600	0.019K
	14	35 0110	9.7	8.0		649	8.20	126	0.090	0.300	0.650	0.027J
	14	35 0155	9.1	8.0		642	8.30	128	0.060	0.200	0.660	0.020J
75/08/15	12	10 0000	27.4	8.4	96	449	9.00	75	0.020K	0.200	0.020K	0.002
	12	10 0005	27.0	8.0		442	8.95	76	0.050	0.300	0.030	0.002
	12	10 0025	26.3	8.0		462	8.90	78	0.050	0.300	0.020	0.002
	12	10 0050	20.3	6.8		403	8.00	94	0.050	0.200	0.290	0.002
	12	10 0100	15.2	5.6		625	8.00	119	0.050	0.200	0.440	0.002
	12	10 0135	11.7	6.0		717	8.00	132	0.020K	0.200	0.590	0.003
75/11/24	13	50 0000	13.4	7.4	75	386	7.20	112	0.020K	0.200K	0.290	0.003
	13	50 0005	13.3	7.2		411	7.10	112	0.020K	0.200K	0.290	0.003
	13	50 0020	13.2	7.0		409	7.00	109	0.020K	0.200K	0.290	0.002
	13	50 0039	13.2	7.2		379	7.10	105	0.020K	0.200K	0.290	0.002
	13	50 0070	13.2	7.2		381	7.20	105	0.020K	0.200K	0.280	0.002
	13	50 0100	13.0	7.2		416	7.00	110	0.020K	0.200K	0.320	0.003
	13	50 0141	11.5	4.2		558	7.10	131	0.020K	0.200K	0.560	0.004

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040813
37 12 16.0 110 39 42.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0160 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/28	14	35 0000	0.019	1.3	
	14	35 0005	0.023		
	14	35 0010	0.024		
	14	35 0015	0.042		
	14	35 0025	0.017		
	14	35 0050	0.012		
	14	35 0090	0.017		
	14	35 0110	1.220		
	14	35 0155	0.054		
75/08/15	12	10 0000	0.011	4.5	
	12	10 0005	0.008		
	12	10 0025	0.007		
	12	10 0050	0.007		
	12	10 0100	0.007		
	12	10 0135	0.009		
75/11/24	13	50 0000	0.011	1.7	
	13	50 0005	0.009		
	13	50 0020	0.009		
	13	50 0039	0.009		
	13	50 0070	0.009		
	13	50 0100	0.013		
	13	50 0141	0.013		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040814
37 10 23.0 110 54 17.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/28	15 45	0000	10.8	9.6	240	563	8.30	119	0.020K	0.200	0.390	0.015J
	15 45	0005	10.6	9.8		562	8.40	120	0.020K	0.200K	0.380	0.013J
	15 45	0025	10.2	9.8		555	8.40	121	0.020K	0.200K	0.390	0.013J
	15 45	0050	10.0	9.6		552	8.40	122	0.020K	0.200K	0.390	0.015K
	15 45	0080	9.9	9.6		551	8.30	126	0.020K	0.200	0.390	0.012J
	15 45	0100	8.6	9.2		532	8.10	132	0.030	0.200	0.440	0.011J
	15 45	0130	7.4	8.8		547	8.10	137	0.020K	0.200	0.500	0.012K
	15 45	0160	6.7	8.4		563	8.20	141	0.020	0.200	0.540	0.016K
	15 45	0200	6.2	8.6		573	8.20	144	0.020K	0.200	0.580	0.016K
75/08/14	17 30	0000	24.1	7.6	138	602	8.70	102	0.020	0.200	0.060	0.009
	17 30	0005	23.8	7.4		591	8.85	102	0.020	0.200	0.050	0.002
	17 30	0025	23.5	5.0		581	7.95	102		0.200	0.240	0.011
	17 30	0050	18.7	6.6		500	7.90	118	0.020	0.300	0.440	0.012
	17 30	0090	14.0	7.0		573	8.00	126	0.020	0.200	0.460	0.011
	17 30	0130	9.1	7.4		662	8.05	131	0.030	0.200K	0.450	0.011
	17 30	0165	7.2	7.6		645	8.00	133	0.030	0.200K	0.540	0.012
	17 30	0200	5.9	5.6		661	8.85	104	0.030	0.200		0.009
75/11/24	14 30	0000	13.1	7.8	240	386	7.20	106	0.020K	0.200K	0.300	0.003
	14 30	0005	13.2	7.2		390	7.20	112	0.020K	0.200K	0.320	0.002
	14 30	0025	13.2	8.2		388	7.10	111	0.020K	0.200K	0.320	0.003
	14 30	0047	13.2	7.2		417	7.10	111	0.020K	0.200K	0.320	0.002
	14 30	0080	13.1	7.0		416	7.20	108	0.020K	0.200K	0.310	0.002
	14 30	0115	13.0	6.8		438	7.10	113	0.020K	0.200K	0.380	0.002
	14 30	0155	10.4	6.6		549	7.10	125	0.020K	0.200K	0.500	0.004
	14 30	0190	8.9	7.0		515	7.20	129	0.020K	0.200K	0.530	0.005
	14 30	0230	7.5	6.8		596	7.00	135	0.020K	0.200K	0.580	0.007

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

64

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040814
37 10 23.0 110 54 17.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/28	15 45	0000	0.015	0.9	
	15 45	0005	0.013		
	15 45	0025	0.013		
	15 45	0050	0.014		
	15 45	0080	0.012		
	15 45	0100	0.011		
	15 45	0150	0.010		
	15 45	0160	0.012		
	15 45	0200	0.013		
75/08/14	17 30	0000	0.011	5.3	
	17 30	0005	0.009		
	17 30	0025	0.009		
	17 30	0050	0.011		
	17 30	0090	0.009		
	17 30	0130	0.008		
	17 30	0165	0.009		
	17 30	0200	0.012		
75/11/24	14 30	0000	0.008	1.9	
	14 30	0005	0.008		
	14 30	0025	0.008		
	14 30	0047	0.008		
	14 30	0080	0.008		
	14 30	0115	0.007		
	14 30	0155	0.008		
	14 30	0190	0.012		
	14 30	0230	0.013		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040815
37 06 44.0 110 59 40.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/28	16	20 0000	11.2	9.6	252	567	8.50	129	0.020K	0.200K	0.380	0.014K
	16	20 0005	11.1	9.6			8.50	136	0.020K	0.200K	0.370	0.013K
	16	20 0025	11.1	9.8			8.50	135	0.020K	0.200	0.370	0.012K
	16	20 0050	10.7	9.8			8.40	135	0.020K	0.200K	0.370	0.003
	16	20 0080	10.5	9.6			8.30	134	0.020K	0.200	0.380	0.002
	16	20 0090	8.9	9.2			8.10	134	0.020	0.200	0.420	0.003
	16	20 0150	6.9	8.8		561	8.20	141	0.020K	0.200K	0.550	0.003
	16	20 0200	6.3	9.0		591	8.40	146	0.020K	0.200	0.600	0.012K
75/08/14	17	00 0000	24.4	8.0	144	682	8.90	107	0.020	0.300	0.120	0.012
	17	00 0005	24.8	8.0		700	8.90	106	0.020	0.200	0.100	0.011
	17	00 0015	24.8	7.0		700	8.95	108	0.020K	0.200	0.100	0.012
	17	00 0035	21.5	5.2		570	8.10	104	0.020	0.200	0.240	0.011
	17	00 0060	15.7	6.2		509	7.95	106	0.030	0.200	0.380	0.010
	17	00 0095	12.3	6.2		619	8.00	119	0.020	0.200	0.460	0.010
	17	00 0135	9.1	7.0		665	8.10	129	0.030	0.200	0.460	0.006
	17	00 0170	7.0	7.0		637	8.10	130	0.020	0.200	0.470	0.012
75/11/24	15	15 0000	13.0		240	391	7.10	106	0.020K	0.200K	0.320	0.007
	15	15 0005	13.0	7.0		401	7.20	109	0.020K	0.200K	0.310	0.003
	15	15 0025	13.0	7.6		400	7.10	110	0.020K	0.200K	0.300	0.002
	15	15 0042	13.0	7.4		396	7.00	108	0.020K	0.200K	0.300	0.002
	15	15 0085	13.0	7.4		395	7.20	120	0.020K	0.200K	0.300	0.002K
	15	15 0130	11.7	5.6		501	7.00	137	0.020K	0.200K	0.450	0.002K
	15	15 0160	10.2	6.6		502	7.00	138	0.020K	0.200K	0.480	0.002K
	15	15 0190	8.7	7.0		556	7.10	144	0.020K	0.200K	0.530	0.004
	15	15 0230	7.4	7.2		577	7.10	145	0.020K	0.200K	0.590	0.006
75/12/02	14	35 0000	11.7	7.2	372	409	8.00	115	0.020K	0.200K	0.330	0.002K
	14	35 0005	11.8	7.2		416	8.00	115	0.020K	0.200K	0.320	0.002K
	14	35 0035	11.7	7.2		421	8.00	115	0.020K	0.200K	0.320	0.002K
	14	35 0070	11.7	7.4		414	8.00	115	0.020K	0.200K	0.320	0.002K
	14	35 0130	11.5	7.0		493	8.00	117	0.020K	0.200K	0.360	0.002K
	14	35 0170	9.4	6.2		553	7.90	134	0.020	0.200	0.530	0.005
	14	35 0210	8.3	6.6		545	7.80	138	0.020K	0.200K	0.580	0.005
	14	35 0220	7.6	6.4		514	7.80	138	0.020K	0.200	0.590	0.005

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040815
37 06 44.0 110 59 40.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/28	16	20 0000	0.012	1.2	
	16	20 0005	0.012		
	16	20 0025	0.011		
	16	20 0050	0.011		
	16	20 0080	0.011		
	16	20 0090	0.010		
	16	20 0150	0.008		
	16	20 0200	0.008		
75/08/14	17	00 0000	0.010	4.3	
	17	00 0005	0.016		
	17	00 0015	0.009		
	17	00 0035	0.009		
	17	00 0060	0.008		
	17	00 0095	0.009		
	17	00 0135	0.008		
	17	00 0170	0.014		
75/11/24	15	15 0000	0.015	2.2	
	15	15 0005	0.008		
	15	15 0025	0.008		
	15	15 0042	0.008		
	15	15 0085	0.008		
	15	15 0130	0.006		
	15	15 0160	0.007		
	15	15 0190	0.011		
	15	15 0230	0.011		
75/12/02	14	35 0000	0.006	0.9	
	14	35 0005	0.006		
	14	35 0035	0.006		
	14	35 0070	0.007		
	14	35 0130	0.008		
	14	35 0170	0.010		
	14	35 0210	0.011		
	14	35 0220	0.011		

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040816
37 15 53.0 110 25 57.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0030 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/28	13 55	0000	13.5	8.6	12	471	8.30	113	0.030	0.800	0.450	0.05[illegible]
	13 55	0005	13.7	8.6		475	8.30	113	0.030	0.600	0.450	0.02[illegible]
	13 55	0010	13.3	7.8		468	8.30	112	0.030	0.600	0.450	0.02[illegible]
	13 55	0015	13.0	8.8		596	8.30	110	0.020	0.500	0.450	0.02[illegible]
	13 55	0026	11.7	8.4		578	8.20	111	0.030	0.600	0.420	0.05[illegible]
75/08/15	11 30	0000	25.6	9.2	60	578	8.80	95	0.020K	0.400	0.040	0.00[illegible]
	11 30	0005	25.9	9.0		576	8.85	96	0.060	0.300	0.050	0.02[illegible]
	11 30	0015	25.2	8.2		575	8.80	95	0.020K	0.300	0.040	0.00[illegible]
	11 30	0028	23.5	5.8		624	8.40	110	0.050	0.200	0.340	0.02[illegible]
75/11/24	13 20	0000	9.9	9.8	54	372	7.10	112	0.020K	0.200K	0.170	0.00[illegible]
	13 20	0005	9.7	9.4		358	7.30	113	0.020K	0.200K	0.160	0.00[illegible]
	13 20	0022	9.1	9.8		385	7.40	114	0.020K	0.200K	0.150	0.00[illegible]
	13 20	0032	4.0	10.4		375	7.20	126	0.020K	0.200K	0.460	0.01[illegible]

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/28	13 55	0000	0.077	1.5	
	13 55	0005	0.050		
	13 55	0010	0.049		
	13 55	0015	0.054		
	13 55	0026	0.075		
75/08/15	11 30	0000	0.029	8.7	
	11 30	0005	0.025		
	11 30	0015	0.022		
	11 30	0028	0.026		
75/11/24	13 20	0000	0.022	9.2	
	13 20	0005	0.020		
	13 20	0022	0.017		
	13 20	0032	0.067		

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

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STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040817
37 20 54.0 110 56 10.0 3
LAKE POWELL
49025 ARIZONA

11EPALES 760109 2111202
0160 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/29	09	10 0000	12.1	9.6	204	579	8.20	123	0.030	0.300	0.160	0.014K
	09	10 0005	12.0	9.6		599	8.35	121	0.020K	0.200K	0.140	0.011J
	09	10 0020	10.6	10.0		591	8.40	119	0.020K	0.300	0.200	0.013J
	09	10 0030	9.6	9.8		747	8.20	119	0.020K	0.400	0.290	0.012J
	09	10 0050	8.8	9.0		741	8.25	119	0.020	0.400	0.350	0.011J
	09	10 0100	7.7	7.2		736	8.00	120	0.020	0.400	0.350	0.003J
	09	10 0155	8.6	2.7		997	7.80	143	0.020	0.300	0.540	0.014J
75/08/15	18	20 0000	27.9	8.4	120	163	8.60	110	0.020	0.600	0.100	0.012
	18	20 0005	27.4	8.6		760	8.75	109	0.030	0.200	0.110	0.007
	18	20 0020	27.0	8.4		755	7.90	111	0.030	0.200	0.100	0.002K
	18	20 0050	21.0	4.8		555	7.80	117	0.030	0.300	0.350	0.002K
	18	20 0070	18.7	3.2		706	7.80	133	0.030	0.200	0.370	0.002K
	18	20 0110	12.8	5.6		607	7.80	136	0.020	0.200	0.360	0.006
	18	20 0150	9.1	4.0		578	7.70	141	0.030	0.200	0.400	0.019
	18	20 0191	8.7	1.2		655	7.50	151	0.050	0.200	0.400	0.029
75/12/04	09	45 0000	11.8	6.8	180	415	7.80	120	0.020K	0.200K	0.300	0.002K
	09	45 0005	11.8	7.2		416	7.80	120	0.020K	0.200K	0.290	0.003
	09	45 0020	11.8	6.8		425	7.80	118	0.020K	0.200K	0.290	0.002K
	09	45 0080	11.8	6.8		419	7.80	119	0.020K	0.200K	0.300	0.002K
	09	45 0120	11.4	6.6		409	7.80	119	0.020K	0.200	0.230	0.002K
	09	45 0140	10.6	5.6		477	7.60	127	0.020K	0.200K	0.440	0.002K
	09	45 0180	8.7	8.2		482	7.50	134	0.020K	0.200	0.420	0.005

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040817
37 20 54.0 110 56 10.0 3
LAKE POWELL
49025 ARIZONA

11EPALES 760109 2111202
0160 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/29	09 10	0000	0.011	1.5	
	09 10	0005	0.013		
	09 10	0020	0.018		
	09 10	0030	0.013		
	09 10	0050	0.018		
	09 10	0100	0.009		
	09 10	0155	0.019		
75/08/15	18 20	0000	0.009	3.9	
	18 20	0005	0.011		
	18 20	0020	0.009		
	18 20	0050	0.008		
	18 20	0070	0.007		
	18 20	0110	0.008		
	18 20	0150	0.024		
	18 20	0191	0.048		
75/12/04	09 45	0000	0.009	0.9	
	09 45	0005	0.008		
	09 45	0020	0.008		
	09 45	0080	0.009		
	09 45	0120	0.009		
	09 45	0140	0.009		
	09 45	0180	0.069		

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STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040818
37 33 13.0 110 46 29.0 3
LAKE POWELL
49017 ARIZONA

11EPALES 760109 2111202
0056 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/29	09 30	0000	10.5	9.6	162	575	8.50	140	0.020K	0.400	0.410	0.012K
	09 30	0005	10.5	9.6		570	8.50	137	0.020K	0.200	0.410	0.012K
	09 30	0015	9.7	9.6		558	8.45	138	0.020K	0.200	0.420	0.012K
	09 30	0030	9.1	9.6		550	8.40	137	0.020	0.200	0.430	0.011K
	09 30	0052	9.1	9.4		550	8.40	139	0.020	0.200K	0.430	0.011J
75/08/15	15 30	0000	27.4	8.0	72	600	8.95	108	0.030	0.300	0.300J	0.005
	15 30	0005	27.4	7.8		599	8.95	107	0.020	0.400	0.020K	0.004
	15 30	0025	25.9	5.8		580	8.60	107	0.030	0.400	0.080	0.004
	15 30	0045	22.9	2.4		533	7.80	110	0.040	0.300	0.280	0.012
	15 30	0070	19.1	1.8		590	7.65	123	0.040	0.300	0.400	0.013
75/11/25	10 50	0000	13.6		120	428		116	0.020K	0.400	0.280	0.004
	10 50	0005	12.4	5.6		425		118	0.020K	0.200K	0.280	0.002K
	10 50	0015	12.4	7.8		412		115	0.020K	0.200K	0.280	0.002K
	10 50	0025	12.4	7.8		415		120	0.020K	0.200K	0.280	0.002K
	10 50	0036	12.4	7.8		413		121	0.020K	0.200K	0.270	0.002K
75/12/02	14 35	0000	11.2	8.2	174	440	8.10	115	0.020K	0.200K	0.320	0.002K
	14 35	0005	11.2	8.2		430	8.10	116	0.020K	0.200K	0.310	0.002K
	14 35	0030	11.0	8.4		417	8.10	117	0.020K	0.200K	0.310	0.002K
	14 35	0065	10.6	8.2		412	8.10	113	0.020K	0.200K	0.300	0.002K

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/29	09 30	0000	0.011	1.5	
	09 30	0005	0.011		
	09 30	0015	0.010		
	09 30	0030	0.009		
	09 30	0052	0.011		
75/08/15	15 30	0000	0.011	6.3	
	15 30	0005	0.012		
	15 30	0025	0.013		
	15 30	0045	0.010		
	15 30	0070	0.030		
75/11/25	10 50	0000	0.013	2.1	
	10 50	0005	0.009		
	10 50	0015	0.009		
	10 50	0025	0.010		
	10 50	0036	0.011		
75/12/02	14 35	0000	0.009	1.3	
	14 35	0005	0.010		
	14 35	0030	0.009		

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040819
37 01 03.0 111 19 40.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/04/29	11 00	0000	10.9	9.8	204	791	8.50	139	0.020K	0.300	0.380	0.010K
	11 00	0005	10.8	9.4		801	8.50	139	0.020K	0.300	0.380	0.011K
	11 00	0030	10.4	9.4		784	8.40	137	0.020K	0.200	0.400	0.013K
	11 00	0060	9.8	9.0		826	8.20	140	0.020K	0.200	0.400	0.004
	11 00	0100	8.4	8.0		897	8.00	141	0.020K	0.200	0.480	0.003
	11 00	0150	7.3	4.4		931	8.00	152	0.020K	0.200K	0.430	0.012K
	11 00	0250	6.8	6.4		994	8.00	155	0.020K	0.200K	0.660	0.016K
75/08/14	15 00	0000	25.7	8.0	204	929	8.65	118	0.020K	0.200K	0.190	0.002
	15 00	0005	25.4	8.8		931	8.70	125	0.040	0.200K	0.400J	0.010
	15 00	0020	25.0	9.2		921	8.70	119	0.040	0.200K	0.200	0.010
	15 00	0040	19.2	6.8		672	8.70	119	0.020	0.200K	0.190	0.011
	15 00	0070	16.1	6.1		645	8.35	116	0.020K	0.200	0.350	0.002
	15 00	0110	12.2	6.0		595	8.15	119	0.050	0.200	0.430	0.009
	15 00	0150	9.3	7.4		644	8.10	128	0.020	0.200K	0.430	0.008
	15 00	0190	7.1	5.4		632	8.05	130	0.020	0.200K	0.490	0.010
	15 00	0225	5.8	6.8		670	8.00	135	0.020	0.200K	0.560	0.012
75/12/02	13 35	0000	12.4	7.4	324	488	8.00	135	0.020K	0.200K	0.520	0.002K
	13 35	0005	12.2	6.2		493	8.00	138	0.020K	0.200K	0.560	0.002K
	13 35	0035	12.2	7.0		520	8.00	122	0.020K	0.200K	0.310	0.002K
	13 35	0080	12.1	7.0		480	8.00	122	0.020K	0.200K	0.280	0.002K
	13 35	0130	12.0	7.0		520	8.00	121	0.020K	0.200K	0.300	0.002K
	13 35	0170	9.7	6.0		519	7.90	130	0.020K	0.200K	0.480	0.002K
	13 35	0200	8.3	6.2		508	7.80	131	0.020K	0.200K	0.520	0.002K
	13 35	0220	7.2	6.4		508	7.80	134	0.020K	0.200K	0.560	0.002K

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/11/26
NATL EUTROPHICATION SURVEY
EPA-LAS VEGAS

040819
37 01 03.0 111 19 40.0 3
LAKE POWELL
49037 ARIZONA

11EPALES 760109 2111202
0999 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/04/29	11 00	0000	0.009	1.3	
	11 00	0005	0.009		
	11 00	0030	0.010		
	11 00	0060	0.010		
	11 00	0100	0.008		
	11 00	0150	0.007		
	11 00	0250	0.013		
75/08/14	15 00	0000	0.008	2.7	
	15 00	0005	0.008		
	15 00	0020	0.007		
	15 00	0040	0.008		
	15 00	0070	0.011		
	15 00	0110	0.008		
	15 00	0150	0.006		
	15 00	0190	0.008		
	15 00	0225	0.009		
75/12/02	13 35	0000	0.005	1.5	
	13 35	0005	0.006		
	13 35	0035	0.006		
	13 35	0080	0.006		
	13 35	0130	0.007		
	13 35	0170	0.005		
	13 35	0200	0.006		
	13 35	0220	0.006		